INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
4800 MARK CENTER DRIVE
ALEXANDRIA, VIRGINIA 22350-1500

July 18, 2017

Mr. Patrick Eddington
Cato Institute
100 Massachusetts Avenue, NW
Washington, DC 20001

Dear Mr. Eddington:

This is in response to your Freedom of Information Act (FOIA) request, and the related case pending in the United States District Court for the District of Columbia, *Eddington v. Office of Inspector General, Department of Defense*, Civil Action No. 1:17-cv-00128, and is provided in compliance with the third scheduled production agreed upon the parties, and approved by the court.

Searches of records maintained by the Department of Defense (DoD) Office of Inspector General identified records responsive to your request, and those records, when appropriate, were also reviewed by the National Security Agency for consultation on their equities and release determination.

One hundred and sixty-two pages of documents are being provided to you at this time. Of these 162 pages, 19 pages, Bates 000247-248, 000261, 000263-000269, 000271-272, 000275-276, 000283-284, 000307, 000309, and 000346, are exempt from release in their entirety pursuant to 5 U.S.C. § 552(b)(1), which pertains to properly classified information; and 5 U.S.C. § 552 (b)(3), which pertains to information exempted from release by statute, in this instance 50 U.S.C. § 3605 and/or 50 U.S.C. § 3024(i).

The remaining 143 pages are appropriate for release with redactions, if any, at this time. The redacted information is exempt from release under the FOIA, specifically FOIA exemption (b)(1), which pertains to properly classified information; (b)(3), which pertains to information specifically exempted from disclosure by statute, in this instance 50 U.S.C §3605 and/or 50 U.S.C. § 3024(i); exemption (b)(6), which pertains to information which constitutes a clearly unwarranted invasion of an individual's personal privacy, in this instance the names, phone numbers and email addresses of personnel; and exemption (b)(7)(C), which protects personal information in law enforcement records which could reasonably be expected to constitute an unwarranted invasion of privacy.

Sincerely,

Catherine M. DelPrete
Supervisory Attorney
FOIA, Privacy and Civil Liberties Office

Enclosures:
As stated

Doc ID: 6585999

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Report 05-INTEL-03
December 15, 2004
Audit Report

OFFICE OF THE INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE

DEPUTY INSPECTOR GENERAL FOR INTELLIGENCE

Requirements for the TRAILBLAZER And THINTHREAD Systems (U//~~FOUO~~)

~~Special Warning~~

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Acronym (U)

(U) NSA/CSS **National Security Agency/Central Security Service**

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INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-2884

December 15, 2004

MEMORANDUM FOR DIRECTOR, NATIONAL SECURITY AGENCY / CHIEF, CENTRAL SECURITY SERVICE (U)

SUBJECT: Audit of the Requirements for the TRAILBLAZER and THINTHREAD Systems (Report No. 05-INTEL-03) (Project No. D2003AL-0100) (U//~~FOUO~~)

(U) We are providing this report for review and comment. This audit was initiated from a Hotline complaint. We considered management comments on a draft of this report in preparing the final report. Management conducted a security classification review of the draft report.

(U) DoD Directive 7650.3 requires that all recommendations be resolved promptly. Management nonconcurred with Recommendations A.1. and A.2. Management partially concurred with Recommendations A.3., B.1., B.2., and B.3. As a result of management comments, we revised Recommendations A.2.and B.1. We request that the Director, National Security Agency/Central Security Service provide additional comments on all recommendations by January 15, 2005.

(U) We appreciate the courtesies extended to the staff. Questions should be directed to DoD OIG (b)(6), (b)(7)(C) at (703) 604-DoD OIG (b)(6), (b)(7)(C) or DoD OIG (b)(6), (b)(7)(C) at (410) 854-DoD OIG (b)(6), (b)(7)(C). See Appendix K for the report distribution. The team members are listed inside the back cover.

Thomas F. Gimble
Deputy Inspector General for
Intelligence

DATED: 23 November 2004
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~~Special Warning~~

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Office of the Inspector General of the Department of Defense

Report No. 05-INTEL-03
(Project No. D2003AL-0100)

December 15, 2005

Requirements for the TRAILBLAZER and THINTHREAD Systems (U)

Executive Summary (U)

(U) Who Should Read This Report and Why? Acquisition decision makers at the National Security Agency (NSA); the designated NSA Milestone Decision Authority for the Under Secretary of Defense for Acquisition, Technology, and Logistics; and personnel in the Office of the Assistant Secretary of Defense (Networks and Information Integration) should read this report because it discusses a better technological and more affordable solution for digital network exploitation than the solution being developed by the NSA.

(U//~~FOUO~~) Background. We performed this audit in response to a Defense Hotline complaint, which alleged that NSA actions in the development of THINTHREAD and TRAILBLAZER resulted in fraud, waste, and abuse. The specific allegations were: (1) TRAILBLAZER development wasted hundreds of millions of dollars; (2) NSA disregarded solutions to urgent U.S. national security needs; (3) NSA modified or suppressed studies and comparisons that favored THINTHREAD over TRAILBLAZER; and (4) NSA did not address FY 2002 congressional requirements to deploy and further develop THINTHREAD.

(~~S//SI~~) THINTHREAD. THINTHREAD was developed as a traffic analysis and discovery tool to streamline and improve computer-based exploitation of digital network communications. [redacted] THINTHREAD was initially deployed to a pilot site in November 2000 and has been deployed to [redacted] additional sites. However, NSA management does not encourage analysts to use THINTHREAD. See Appendix E for further details.

(U//~~FOUO~~) TRAILBLAZER. TRAILBLAZER is an Acquisition Category-1A program to acquire, through a series of spiral developments, an integrated system to provide the much-needed mission capability against the Global Network. [redacted] TRAILBLAZER is being developed. See Appendix B for further details.

(U//~~FOUO~~) [redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

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NSA (b)(3) 50 USC 3605

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

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(U//~~FOUO~~)

(S) **Results.** NSA enhanced existing digital network exploitation systems, under the to provide an interim solution for digital network exploitation, when THINTHREAD, a less costly and more capable solution, was already operational, available, and ready for deployment. As a result, the National Security Agency is inefficiently using resources to develop a digital network exploitation system that is not capable of fully exploiting the digital network intelligence available to analysts from the Global Information Network. NSA should deploy THINTHREAD as the interim capability digital network process for the digital network exploitation mission and use a complementary approach with and THINTHREAD in the collection sites, where required, until THINTHREAD is fully enhanced and extended Finally, NSA should develop a formal training class for analysts to learn how to effectively use THINTHREAD (Finding A).

(U//~~FOUO~~) NSA management excluded THINTHREAD and its technologies as a viable long-term solution for digital network exploitation for the TRAILBLAZER Initial Transformation Activities, Technology Demonstration Platform and Objective Program. As a result, the NSA transformation effort may be developing a less capable long-term digital network exploitation solution that will take longer and cost significantly more to develop. NSA management should designate a team to assess the ability of THINTHREAD or its technologies as a long-term solution to meet the requirements of the TRAILBLAZER Also, NSA management should provide the results of this assessment to the TRAILBLAZER Technology Demonstration Platform Milestone Decision Authority for use in making the Milestone B decision and include THINTHREAD as an alternate system in the TRAILBLAZER Analysis of Alternatives required for Milestone B (Finding B).

(U) **Management Comments and Audit Response.** The management comments form the Director, NSA/Chief, Central Security Service contained significant disagreements with the report findings. The Director stated that the world's most advanced cryptologic experts have assessed the situation and are confident in the approach NSA has taken. The Director nonconcurred with the recommendation to deploy THINTHREAD as the interim capability digital network process and to use a complementary approach with and THINTHREAD in the collection sites. The Director concurred or partially concurred with the recommendations to develop a formal training class, designate a team to assess the ability of THINTHREAD as a long-term solution, and include this assessment as part of the TRAILBLAZER Milestone B decision. The Program Executive Officer and TRAILBLAZER management will estimate the cost/schedule impacts after they receive estimates from the review team and will decide at that time whether to concur. Three of the four partial concurrences depend upon the Program Executive Officer and TRAILBLAZER management decision on whether THINTHREAD or its technologies can meet the long-term requirements

(U) We revised the report findings and recommendations based on the Director's comments. However, we continue to believe that THINTHREAD and its capabilities can better satisfy NSA requirements at less cost. We request that the NSA/Chief, Central Security Service provide a risk mitigation plan describing the steps he will take to assess THINTHREAD. We do not agree with management that it would be detrimental to the signals intelligence mission to enhance the services of THINTHREAD as

(U) the interim digital network exploitation system. We request that the Director, NSA/Chief, Central Security Service provide additional comments to this report by January 15, 2005. See the Findings section of the report for a discussion of management comments and audit responses, Appendix J for a detailed audit response to the management comments, and the management comments section of the report for the complete text of the comments

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NSA (b)(3) 50 USC 3605

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NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

(U) Background

(C) **Hotline Allegations.** A letter to the Defense Hotline requested that the Inspector General of the Department of Defense audit and investigate the acquisition of the TRAILBLAZER and THINTHREAD programs. The complaint charged the NSA with fraud, waste, abuse, and a disregard for a solution to urgent security needs because the TRAILBLAZER Program did not consider that THINTHREAD was already developed to perform the same mission. Also, the NSA ignored or modified the recommendations of two technology studies that favored the THINTHREAD Program. Finally, the NSA did not deploy THINTHREAD to additional collection sites as directed by Congress.

(U) National Security Agency Mission and Planning Guidance. The mission of the National Security Agency/Central Security Service (NSA/CSS) is to provide actionable Signals Intelligence to U.S. decisionmakers, from the national to the tactical level, while protecting the nation's vital information from attacks. The urgency of the NSA/ CSS mission is greater than ever since the September 11th attacks and the Global War on Terrorism.

(U//~~FOUO~~) In addition, defense planning guidance and the Director of Central Intelligence guidance stipulate the need for "a globally vigilant intelligence system that can provide early strategic warning of crisis and detect threats" that is supported by capabilities such as an "information superiority backbone."

(~~S//SI~~) **TRAILBLAZER** is a [redacted] major acquisition program, which started in FY 2000 and is scheduled for initial operating capability in FY 2009, to acquire an integrated system that is composed largely of commercial technology to provide the much-needed mission capability against the global network through a series of spiral developments. The TRAILBLAZER system will deliver hardware and software, system integration, and program integration services to include:

NSA (b)(3) 50 USC 3605

[redacted]

(C) The TRAILBLAZER Program includes the Technical Demonstration Program, the Objective Program, the [redacted] The acquisition strategy consists of

NSA (b)(3) 50 USC 3605

The TRAILBLAZER Program has not been stable since its infancy and is undergoing its third revision.

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

(S) **THINTHREAD.** The Signals Intelligence Automation Research Center started a computer network defense project in 1996 that became known as this project eventually led to THINTHREAD. THINTHREAD is a low cost, low maintenance, high capacity, and high precision digital network exploitation system. It was developed by a small team of engineers in the Signals Intelligence Automation Research Center as a traffic analysis and discovery tool. Because THINTHREAD was considered to be a research and development project, the developers were told to discover a different approach to digital network exploitation. Therefore, NSA did not approve some of the concepts and resources used. THINTHREAD was initially deployed in November 2000 for developmental evaluation at one pilot site, using a high profile target as the prototype scenario. The system was declared operational, and has been used by some NSA analysts since November 2000.

(U//~~FOUO~~) **Congressional Interest in THINTHREAD.** Soon after work began on TRAILBLAZER, staff members from the House of Representatives Permanent Select Committee on Intelligence who were briefed on THINTHREAD capabilities noted that there were overlaps between THINTHREAD and TRAILBLAZER. They asked why THINTHREAD did not constitute at least part of the TRAILBLAZER effort. The House of Representatives Permanent Select Committee on Intelligence verbally requested NSA to conduct a technical review to compare the existing and planned capabilities of THINTHREAD and TRAILBLAZER and requested that NSA provide the committee with the results. NSA did not complete the verbal request, which resulted in the Congressional Directed NSA Modernization Study in the FY 2001 Intelligence Authorization Bill (CMS 1-25-2001).

(U) **Policy Governing Signals Intelligence Systems Acquisition.** Guidance for Signals Intelligence system acquisition is provided in DoD Directive 5000.1, DoD Instruction 5000.2, and the Clinger Cohen Act of 1996. Specifically, these regulations provide the framework for the acquisition of major automated information systems.

(U) **DoD Directive 5000.1, "The Defense Acquisition System," May 12, 2003.** DoD Directive 5000.1 establishes the management process by which the DoD provides effective, affordable, and timely systems to the users. DoD Directive 5000.1 states that all acquisition professionals shall continuously develop and implement initiatives to streamline and improve the Defense Acquisition System. Specifically, this directive states that military decision authorities and program managers shall examine and, as appropriate, adopt innovative practices that reduce cycle time and cost and encourage teamwork.

(U) DoD Instruction 5000.2, "Operation of the Defense Acquisition System," May 12, 2003. DoD Instruction 5000.2 establishes a management framework for translating mission requirements into stable, affordable, and well managed acquisition programs that include weapon systems and automated information systems, and highly sensitive classified, cryptologic, and intelligence projects and programs. Instruction 5000.2 states that, during the initial concept design, DoD Components should examine multiple concepts and material approaches to optimize the way that DoD provides these capabilities. That approach shall include robust analyses that consider affordability, technology maturity, and responsiveness.

(U) Clinger-Cohen (Information Technology Management Reform) Act of 1996. This act requires that heads of executive agencies develop and use best practices in the acquisition of information technology. The process of an executive agency shall include minimum criteria to be applied in considering whether to undertake a particular investment in information systems, including criteria related to the quantitatively expressed projected net, risk-adjusted return on investment and specific quantitative and qualitative criteria for comparing and prioritizing alternative information systems investment projects.

(U) NSA/CSS Circular 5000R, "Acquisition Management," January 9, 2001. The circular implements the principles of DoD Directive 5000.1 and DoD Regulation 5000.2-R within the NSA/CSS. It establishes basic objectives, policies, procedures, and responsibilities for acquisition management. The circular states that for acquisition management within the Defense Cryptologic Program, NSA should address interoperability between existing and future Service tactical Signals Intelligence systems, connectivity between tactical and national systems, consider applicable technology that may satisfy the requirement, and possible duplication of ongoing effort.

(U) Objectives

(U//~~FOUO~~) The overall audit objective was to evaluate whether THINTHREAD should have been considered the best source for digital network exploitation. We did not review the management control program. See Appendix A for a discussion of the scope and methodology.

NSA (b)(3) 50 USC 3605

A. The NSA Interim Solution to Urgent National Security Needs (U)

(TS//SI) The NSA deployed enhanced legacy systems and services under the [redacted] although requirements could have been satisfied better with an existing and more capable and less costly system, THINTHREAD. Those conditions occurred because NSA:

- (U//~~FOUO~~) did not consider THINTHREAD as an alternative solution to a quick reaction capability requirement for an interim digital network exploitation system after the September 11, 2001, terrorist attacks; and
- (U//~~FOUO~~) did not follow the recommendations of internal and external technical reviews completed in 2001 that recommended:
  1. (U//~~FOUO~~) deploying THINTHREAD as the interim solution for digital network exploitation; and
  2. (U//~~FOUO~~) extending and enhancing the capabilities of THINTHREAD;
- (TS//SI) delayed deployment of THINTHREAD to collection sites as directed by Congress in FY 2002; and

(S) As a result, NSA initiated and used [redacted] as an interim digital network exploitation solution, which NSA plans to use until FY 2009. [redacted] is not capable of fully exploiting the digital network intelligence available to analysts from the global information network and costs significantly more to develop, field, and maintain than THINTHREAD.

(U) Urgent National Security Needs

(~~TS//SI~~) NSA documented problems with the existing NSA/CSS Signals Intelligence systems. In particular, the NSA/CSS intelligence system is not capable of handling the volume of communications on the Global Network, and the amount of intelligence that is transferred to and stored in NSA databases is unmanageable. The NSA/CSS Signals Intelligence systems, developed in response to the Cold War, were proficient at intercepting, processing, and producing intelligence from analog signals and, to some extent, digital communications on predominantly radio frequency carriers. While analog communications matured and spread at a rate that signals intelligence technology was able to match, digital technology virtually exploded in the communications environment. [redacted] The volume of communications worldwide is growing rapidly, the variety of communications modes and media are practically innumerable, and the velocity at which the changes are occurring left the Signals Intelligence system far behind.

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

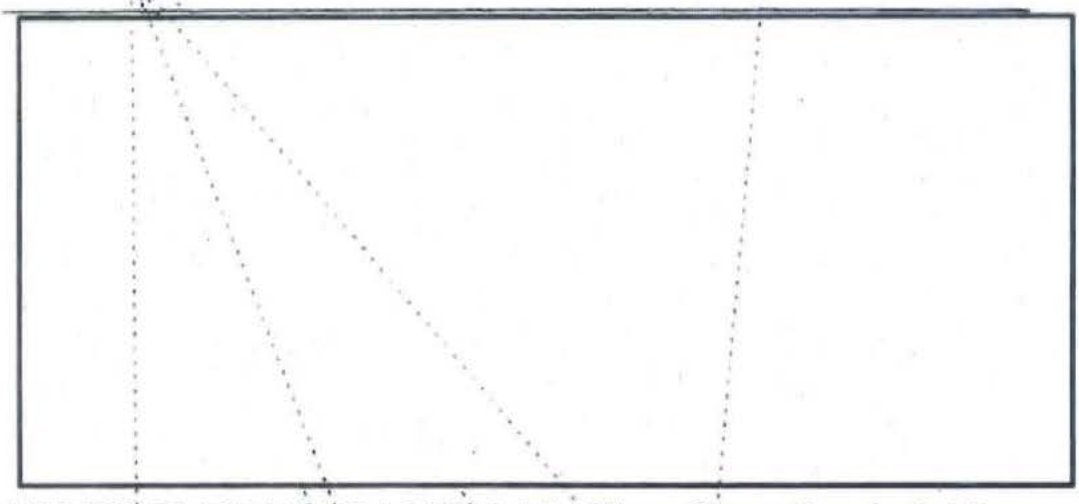
(~~TS//SI~~) Prior to September 2001, NSA efforts to develop an interim digital network exploitation system led to the development of THINTHREAD and the TRAILBLAZER Initial Transformation Activities' [redacted] The development of those systems focused on digital network exploitation [redacted]

THINTHREAD (U)

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

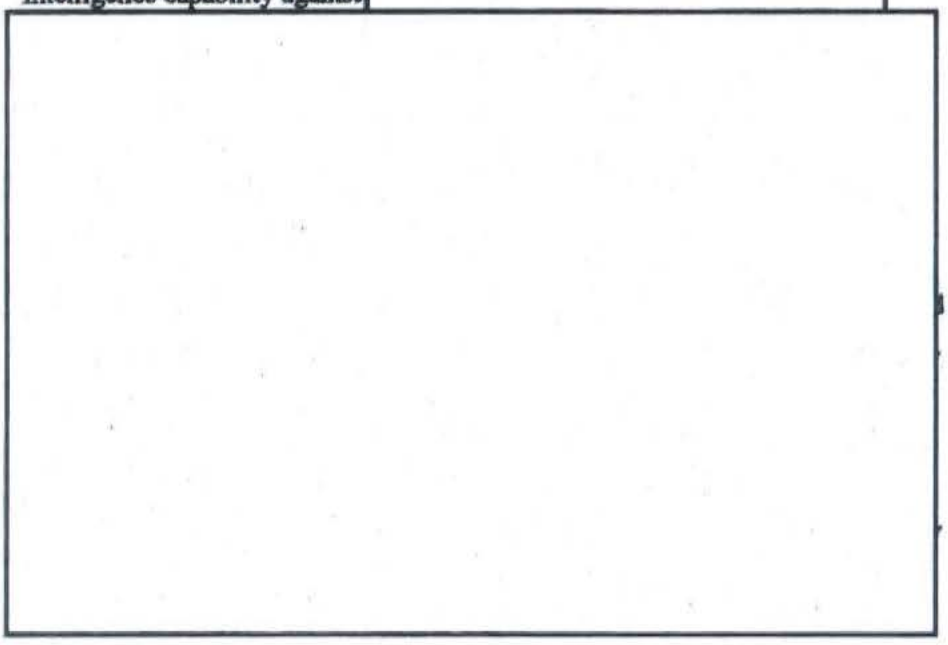
(~~S//SI~~) **THINTHREAD.** In January 2000, a small team of engineers within the Signals Intelligence Automation Research Center was provided a [redacted] budget to discover a different approach to digital network exploitation. Within a year and under budget, the team delivered an end-to-end collection and reporting architecture and a system prototype, THINTHREAD, with breakthrough processing capabilities. THINTHREAD is a cost-effective, high-capacity, high-precision digital network exploitation system that was initially intended to be a traffic analysis and traffic discovery tool [redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605



(U//~~FOUO~~) TRAILBLAZER Initial Transformation Activities

~~(TS//SI)~~ The TRAILBLAZER Initial Transformation Activities, an initiative that began in March 2001 at a cost of approximately [redacted] focused on a set of efforts to demonstrate essential capabilities and establish an Initial Operational Capability by June 2002 that would lead the transformation of NSA into an era of effective and efficient digital network exploitation. The immediate objective of the TRAILBLAZER Initial Transformation Activities [redacted] was to provide an initial operating capability of an improved Signals Intelligence capability against [redacted]



[redacted]

NSA (b)(3) 50 USC 3605

NSA (b)(3) 50 USC 3605

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NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

(U) Congressional Guidance

~~(S//SI)~~ The FY 2002 Authorizing Conference Language stated that the Intelligence Community is so formidable in support of ongoing mature systems that it is impossible to explore new and innovative capabilities simply because the base does not exist. The Intelligence Community may be sacrificing future capabilities trying to meet increasing demands for yesterday's capabilities. The conferees believe that the TRAILBLAZER 1 interim or bridge capability should focus on low-cost initiatives that can implement, quickly and affordably, significant efficiencies, preferably from the front-end reception of data to the back-end of processing and production. The conferees were also concerned with lack of discernable progress made by the TRAILBLAZER 1 Program, which had shown little progress for the funds spent. The conferees believed that the TRAILBLAZER 1 Program would not promptly deliver capabilities for the interim.

(U)

(U//~~FOUO~~) In response to the terrorist attacks on the World Trade Center and the Pentagon on September 11, 2001, and the ensuing wartime threat mode, NSA needed a quick reaction capability for digital network exploitation. Alternative solutions to satisfy this requirement included THINTHREAD or enhancement of existing legacy systems under the

(U) Alternative Solution for a Quick Reaction Capability Requirement

NSA (b)(3) 50 USC 3605

(S//SI) In September 2001, NSA developed the operational requirements for a quick reaction capability to meet the existing threat. THINTHREAD was operational and designed to exploit [redacted] and was developing additional capabilities. At the time, neither the existing legacy systems and subsequent enhancements made to them as a part of the [redacted] development nor THINTHREAD had the capability to meet all of the operational requirements identified by NSA. The NSA Modernization Study stated that with additional funding of approximately [redacted] and [redacted] engineers, THINTHREAD could be enhanced to fulfill most, if not all the operational requirements identified. However, for no documented reason, NSA management did not consider THINTHREAD as a viable corporate solution for the quick reaction capability requirement.

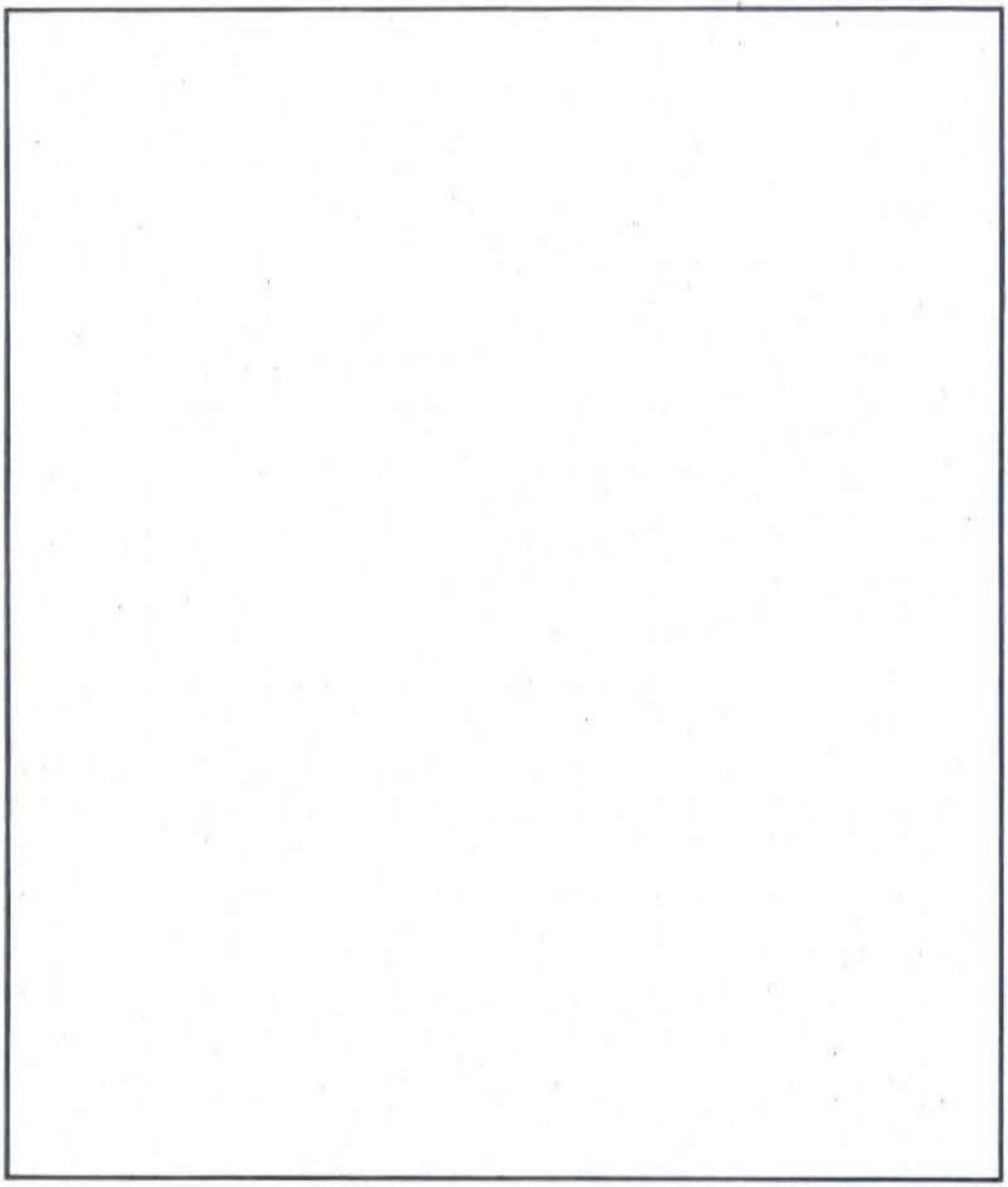
(U//~~FOUO~~) Ability of [redacted] and THINTHREAD to Meet Quick Reaction Capability Requirements

~~(C)~~ Several studies identified an overlap among the THINTHREAD and TRAILBLAZER programs. In March 2002, the THINTHREAD Program was moved from the Signals Intelligence Automation Research Center to the Directorate for Data Acquisition–Cryptanalysis and Exploitation Services'

[redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)



(U//~~FOUO~~) The THINTHREAD system had most of the capabilities shown in Table 1 before September 2001. However, due to the lack of management support and the decision to enhance legacy systems, the original THINTHREAD development team was dispersed, and the [redacted] development continued. THINTHREAD could have provided a highly effective, low-cost solution for the quick reaction capability requirement.

NSA (b)(3) 50 USC 3605

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

NSA (b)(3) 50 USC 3605

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(U//~~FOUO~~) Major Differences Between THINTHREAD and

(U//~~FOUO~~) **Flexibility and Modularity.** In June 2002, the THINTHREAD Project Manager stated that the THINTHREAD system was very flexible, scalable, and adaptable to a wide range of data ingest environments. THINTHREAD code was designed to be reusable and could quickly be programmed to process new signal types. THINTHREAD used commercial-off-the-shelf hardware products listed on the NSA Enterprise Solutions baseline.

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

[redacted]

(U//~~FOUO~~) **Technical Review Studies.** A number of internal and external technical review studies were conducted to determine whether a duplication of effort existed between applications within the THINTHREAD and TRAILBLAZER programs. Those technical review studies concentrated on the [redacted] segments of those two systems, not the full capabilities of the system. See Appendix F for further details on technical reviews conducted on the THINTHREAD and TRAILBLAZER programs.

NSA (b)(3) 50 USC 3605

(U//~~FOUO~~) **Existing State of** [redacted] **at NSA**

[redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

~~(S//SI)~~ **THINTHREAD Solutions.** THINTHREAD developed solutions for most of the digital network exploitation issues identified in the Tiger Team's final report. The THINTHREAD selector dictionary was developed with new

(U) Internal Reviews

~~(S)~~ **The System Review and the THINTHREAD Technical Review.** In early 2001, at the request of the NSA Deputy Director, a senior system engineer was tasked to conduct a technical review to identify the similarities and differences between the system capabilities of the System, a subsystem of TRAILBLAZER, and the of THINTHREAD. The senior system engineer personally selected a panel of NSA experts to conduct this review. The technical review panel was not tasked to identify the similarities and differences between the TRAILBLAZER and THINTHREAD system capabilities in their entirety. Areas assessed were performance, resources, maintainability, scalability, and the ability to meet mission requirements. An initial report on the findings was published in February 2001. In March 2001, the NSA Deputy Director requested that a follow-up review be conducted to determine how the TRAILBLAZER Initial Transformation Activity subsystem and the THINTHREAD could be merged.

(U//~~FOUO~~) Results of the Technical Review. The technical review concluded that significant overlaps existed in the TRAILBLAZER Subsystem

(U//~~FOUO~~) [redacted] System and the THINTHREAD Program and that the approaches and development philosophies differed. Both reviews reached the same conclusions and recommended that:

- (U//~~FOUO~~) [redacted]

NSA (b)(3) 50 USC 3605

- (~~S//SI~~) NSA upper management should provide [redacted] and [redacted] engineers to THINTHREAD to continue the development and expand the capabilities of THINTHREAD; and
- ((U//~~FOUO~~) NSA upper management should support THINTHREAD.

(U) External Reviews

[redacted]

- (U//~~FOUO~~) [redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

(U//~~FOUO~~) [redacted]

[redacted]

NSA (b)(3) 50 USC 3605

(U//~~FOUO~~) Recommendation:

- (U//~~FOUO~~)

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

(S//~~SI//REL~~) Recommendation:

(S//~~SI~~) **NSA Modernization Studies.** The first "NSA Modernization Study," July 2001, was conducted by The National Technology Alliance, National Center for Applied Technology after a thorough review of ongoing activities within the TRAILBLAZER Program Management Office, the THINTHREAD Program Office, and interviews with key program personnel. The Modernization Study team observed that, during the TRAILBLAZER's Concept Development Phase studies and before conducting an analysis of alternatives, the TRAILBLAZER Program Management Office continued to develop an interim capability, known as the TRAILBLAZER The team concluded that the TRAILBLAZER could become a potential "throwaway" system, depending on the results of the Concept Development Phase and the Analysis of Alternatives. In addition, the team observed that NSA hesitated to deploy THINTHREAD, a low-cost, readily fieldable, interim The NSA Modernization Study disclosed that:

- (S//~~SI~~) NSA did not use existing products (THINTHREAD) to their full potential;

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

(U) The NSA Modernization Study recommended that:

- (U//~~FOUO~~) the TRAILBLAZER Phase A Initial Transformation Activities be restructured to avoid the development of the TRAILBLAZER [redacted]
- (U//~~FOUO~~) THINTHREAD be used as the interim capability prototype (also a potential throwaway system depending upon the results of the Concept Development Phase and Analysis of Alternatives – but at a significantly lower cost than the [redacted]
- (U//~~FOUO~~) [redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

(U//~~FOUO~~) The National Center for Applied Technology issued a second report, a "quick-look" follow-on to the first report, in December 2001. The Chief, Signals Intelligence Programs invited the original study team to conduct a follow-on study to evaluate progress within the TRAILBLAZER Program Management Office. Despite noting some changes made in NSA management and the TRAILBLAZER Program's acquisition strategy that promised to address the conflicts and issues noted in the first report, the study team found that:

- (S) the development of the [redacted] was not stopped. A number of technical interface issues arose during the initial integration of the [redacted] and the [redacted] subsystem had not met its planned delivery of October 3, 2001, to the NSA Test and Evaluation Center. NSA management concluded that it was not necessary to suspend the development of the TRAILBLAZER [redacted] subsystem because the program was well managed, on schedule, and under budget.
- (U//~~FOUO~~) The TRAILBLAZER Program Management Office did not view THINTHREAD as a program asset.

(S//SI) NSA dispersed the original THINTHREAD development team after the technical reviews. The THINTHREAD Program was moved from the Signals Intelligence Automated Research Center Office to the Director of Analyses and Production – Innovisions. NSA did not implement the recommendation to provide [redacted] and [redacted] engineers to the THINTHREAD Program to extend and enhance THINTHREAD capabilities. See Appendix F for a more detailed discussion on the NSA Modernization Studies.

NSA (b)(3) 50 USC 3605

[redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

(U) User Feedback on THINTHREAD

~~(S//SI)~~ **NSA Analyst Feedback.** A team of analysts did not support the developers of THINTHREAD because NSA did not consider THINTHREAD as the corporate solution to the digital network exploitation requirement. [redacted] The analysts, however, were not allowed to assist the THINTHREAD developers. After the THINTHREAD team developed the taxonomies, THINTHREAD did not initially generate a significant amount of reportable data. However, after one dedicated analyst, frustrated with the quality and quantity of the intelligence data he received from conventional means, wrote his own taxonomies for THINTHREAD, both the quality and quantity of intelligence data received from THINTHREAD dramatically improved. The analyst received intelligence data that he was not able to receive before using THINTHREAD. The analyst received messages in the same context as they were sent. [redacted]

(U//~~FOUO~~) Intelligence analysts used THINTHREAD at their own discretion because THINTHREAD was not considered the corporate solution for digital network exploitation. Intelligence analysts taught themselves how to use THINTHREAD because NSA did not provide users with system training. Intelligence analysts who used THINTHREAD stated that THINTHREAD:

- (U) had an easier query function;
- (U) was a faster and more efficient collection capability;

[redacted]

- (U) had easier viewing capabilities because it was Web based;

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

[redacted]

[redacted]

 NSA (b)(3) 50 USC 3605

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

- (U//~~FOUO~~) made a major contribution by challenging the way NSA prioritizes and forwards traffic to the NSA workforce.

[redacted]

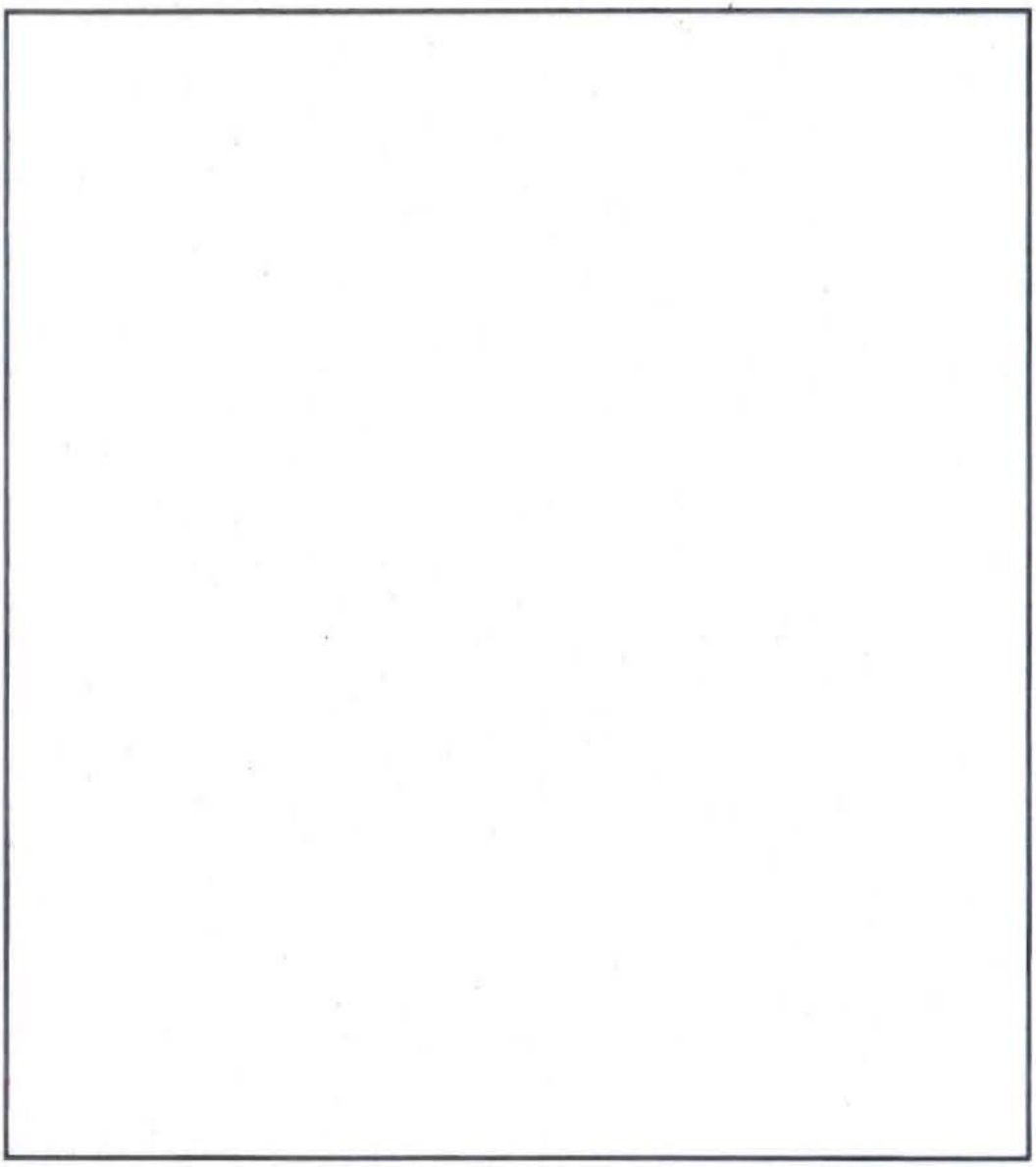
[7] (U) A complete system that solves all the processing problems itself. It has its own input, control, status, monitoring, user interfaces, and data formats. Even though other systems have exactly the same problems to solve, stove-piped systems will implement their own solutions to each.

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

(U) Congressional Directed Action

(U) THINTHREAD Deployment

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)



(U) Rationale for Delayed Deployment of THINTHREAD

(U) **U.S. Signals Intelligence Directive 18 (Directive 18).** Directive 18 states that the policy of the U.S. Signals Intelligence System is to target or collect only foreign communications. The Signals Intelligence System will not intentionally collect communications to, from or about U.S. persons or persons or entities in the United States except as set forth in the Directive 18. If the Signals Intelligence System inadvertently collects such communications, it will process, retain, and disseminate them only in accordance with Directive 18.

Doc ID: 6580999
NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

(S//SI) Signals Intelligence management claimed that THINTHREAD deployment was delayed because the NSA General Counsel had Directive 18 issues. When THINTHREAD was deployed to [redacted] as a research program, the Office of General Counsel limited the usage of THINTHREAD to those analysts testing the THINTHREAD system. [redacted] Signals Intelligence management claimed that the Office of General Counsel wanted verification that it was legal to [redacted] before determining whether [redacted] were protected under Directive 18. [redacted] On May 18, 2002, the Office of General Counsel informed Signals Intelligence management that the office had no legal concerns with THINTHREAD. The THINTHREAD Program Manager also stated that the Office of General Counsel never formally cited THINTHREAD with noncompliance of Directive 18 since it was deployed.

[redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

~~(C)~~ **System Documentation.** Signals Intelligence management also claimed that the lack of system documentation delayed the deployment of THINTHREAD. The THINTHREAD system began as a prototype when only limited software documentation was required. The THINTHREAD Program Manager stated that the documentation of THINTHREAD software was completed in July 2003. Although Signals Intelligence management claimed that lack of documentation prevented the deployment of THINTHREAD to NSA collection sites, the contractor program manager stated that THINTHREAD could have been deployed to fulfill a Quick Response Capability need. THINTHREAD was also successfully deployed to sites, and NSA personnel stated that made enhancements to the THINTHREAD system. Therefore, the lack of documentation may not have had an immediate effect on the deployment of THINTHREAD to collection sites.

~~(TS//SI)~~ **Studies.** Prior to THINTHREAD deployment, the Technology Test and Evaluation Assessment, March 25, 2002, advised that the following risk mitigation and preparation actions be addressed:

NSA (b)(3) 50 USC 3605

- (U//~~FOUO~~) Provide training to site support personnel, implement a THINTHREAD systemwide configuration management process, and develop a process by which site personnel can identify and resolve problems with the system as they arise to minimize the operational risk of deploying THINTHREAD to sites;
- (U) Generate user, system, technical, and programmatic documentation;
- (U) Accelerate deployment planning; develop necessary partnerships with recipient sites and deployment support organizations; and
- (U) Acquire sufficient numbers of appropriately skilled personnel to develop documentation, perform deployment planning, support deployments to sites, automate user support processes, and develop controlling and measuring activities for multiple deployments.

~~(S//SI)~~ The Technology Test and Evaluation did not find any technical reasons not to deploy THINTHREAD. The NSA Modernization Study, July 13, 2001, conducted by the National Technical Alliance stated that the TRAILBLAZER acquisition strategy did not accommodate all of the concepts, approaches, and techniques being pursued within the TRAILBLAZER Program. In particular, the

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

~~(S//SI)~~ National Technical Alliance team did not understand the rationale for not deploying a low-cost, field-ready capability such as THINTHREAD, especially since THINTHREAD had been deployed to [redacted] before the Concept Development Phase studies and the Analysis of Alternatives were completed, and the TRAILBLAZER Objective Program Phase B and C *End-to-End prototype* was deployed.

[redacted]

(U) Training for THINTHREAD Users

~~(S//SI)~~ Analysts at NSA were not adequately trained to fully operate the THINTHREAD system. NSA did not develop formal classroom training to instruct THINTHREAD system users how to set up and operate THINTHREAD to enhance users' ability to collect, process, and exploit digital network intelligence from [redacted] communications channels. A few analysts taught themselves and informally provided user training to other analysts. The On-the-Job Handbook enables THINTHREAD [redacted] operations personnel to learn about the system in a self-paced instructional format. The goal of the Handbook is to lead trainees to a skill level that would allow them to effectively operate the THINTHREAD system

~~(S//SI)~~ Although many analysts stated that THINTHREAD is user friendly, a formal training course would provide users with a full overview of the THINTHREAD capabilities and operational procedures. Educating users in how to create simple and [redacted] is very important. Analysts must carefully [redacted]

~~(S//SI)~~ Because NSA did not provide formal classroom training, analysts were reluctant to use THINTHREAD.

(U) Summary

~~(S//SI)~~ The THINTHREAD system has the capability to provide a cost-effective, high capacity, high precision digital network exploitation system that should be immediately deployed to perform parts of the interim digital network exploitation mission. Studies completed by internal technical review teams and an external team of experts concluded that the THINTHREAD system, its technologies, and its approach to digital network exploitation were better than NSA's current capabilities, . The full system also scores analysis in a form more conducive to properly trained analysts, and has a very . THINTHREAD provides the systems capability that NSA needs to keep pace with the Global Information Environment. THINTHREAD produces valued, unique intelligence that meets customer needs in a timely, cost-effective manner; that is driven by the needs of its customers; and that is flexible, adaptable, and agile enough to anticipate and respond to the changing needs of NSA, Signals Intelligence targets, and technologies.

~~(TS//SI)~~ Although the House Permanent Select Committee Intelligence Authorization Act for FY 2001 directed NSA to deploy THINTHREAD to collection sites immediately, THINTHREAD was deployed to sites over a 2-year period. According to a 2002 briefing to the House Permanent Select Committee on Intelligence, of those sites are considered optimal collection sites. The NSA delayed deployment of THINTHREAD because Signals Intelligence management transferred THINTHREAD from the development team. Signals Intelligence management claimed that THINTHREAD did not comply with Directive 18 and THINTHREAD developers did not document system development to allow deployment. Although studies recommended that NSA deploy THINTHREAD as an interim solution and as a risk-reduction test bed for the TRAILBLAZER Program, THINTHREAD was not timely deployed as a complete, mission-critical, digital network exploitation capability. In addition, NSA did not develop a formal training program for THINTHREAD users. As a result, analysts did not have access to all digital network intelligence data to assist in the development of intelligence reports. NSA management should consider implementing the following recommendations before continuing

(U) Management Comments on the Finding and Audit Response

(U//~~FOUO~~) Management Comments. The NSA management stated that the draft report did not include significant information or included wrong or misleading information. The complete list of management comments is in the Management Comments section of this report.

(U//~~FOUO~~) **Audit Response.** We obtained, reviewed, and analyzed many documents and we interviewed several NSA and contractor personnel to form the conclusions in this report. We included all information relevant to support the report findings and recommendations. Many people we interviewed asked not to be identified for fear of management reprisal. We gathered information from many sources to support the finding. Paragraphs frequently contain information from several sources to reinforce conclusions. Based on management comments, we made various editorial changes to the draft report. See Appendix J for a completed audit response to each management comment.

(U) Recommendations, Management Comments, and Audit Response

(~~S//SI~~) **Revised Recommendation.** As a result of management comments, we revised Recommendation A.2 to request that THINTHREAD be fully enhanced and extended to include handling the necessary services as well as [redacted]

(U) A. We recommend that the Director, National Security Agency/Chief, Central Security Service:

1. (~~S//SI~~) Deploy THINTHREAD as the interim capability digital network exploitation system.

(~~S//SI~~) **Management Comments.** The Director, National Security Agency/Chief, Central Security Service nonconcurred and stated that the systems engineering management integrated THINTHREAD concepts into [redacted] NSA management stated it would be detrimental to remove non-THINTHREAD capabilities from the existing digital network exploitation architecture. The National Security Agency has consolidated processing activities by improving existing capabilities and developing new capabilities to create [redacted] as the overarching digital network exploitation program. Annex A of the management comments compares [redacted] services with THINTHREAD services. NSA management stated that [redacted] services exceed THINTHREAD system capabilities.

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

(~~S//SI~~) **Audit Response.** We accept that THINTHREAD capabilities are already deployed within the National Security Agency's [redacted] analysis and production programs as a result of previous congressional direction, sound systems engineering practices, and common sense. However, even though THINTHREAD capabilities and some lessons learned were integrated into some components of [redacted] 3 years after the start of initial development, [redacted] THINTHREAD systems were deployed but the National Security Agency did not emphasize the use of those systems, analysts were not formally trained to use it, and it was not deployed to sites where the systems' full capabilities can be properly used and tested.

NSA (b)(3) 50 USC 3605

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

[redacted]

~~(S//SI)~~ **Management Comments.** The Director, National Security Agency/Chief, Central Security Service nonconcurred because the National Security Agency management believes that migration from [redacted] to

[redacted]

THINTHREAD. Management did not understand what was meant by "fully enhanced and extended THINTHREAD" in the draft version of this report.

~~(S//SI)~~ **Audit Response.** Based on management comments, we revised the recommendation to explain more clearly the meaning of "fully enhanced and extended THINTHREAD." We recognize that the National Security Agency increased its digital network exploitation [redacted] capability over the past few years; however, the existing system, [redacted]

[redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

~~(TS//SI)~~ that the National Security Agency management reconsider its position and provide additional comments on using a complementary approach with [redacted] and THINTHREAD in the collection sites, where required, until THINTHREAD is fully enhanced and extended to [redacted]

3. ~~(S)~~ Develop formal classroom training for the entire THINTHREAD system to include the function of each component [redacted]

(U//~~FOUO~~) Management Comments. The Director, National Security Agency/Chief, Central Security Service concurred. In April 2003, NSA provided 350 pages of guided courseware in Data Item DI-ALSS-81523A.

~~(C)~~ Audit Response. Management comments were partially responsive. Although the National Security Agency integrated THINTHREAD components into the Signals Intelligence System, it still needs to develop a formal training course for the THINTHREAD end-to-end system. We request that management reconsider its position towards providing formal classroom training and submit additional comments by January 15, 2005.

NSA (b)(3) 50 USC 3605

B. The NSA Transformation (U)

~~(C)~~ NSA management excluded THINTHREAD and its technologies as a viable long-term solution for digital network exploitation for the TRAILBLAZER Initial Transformation Activities, Technology Demonstration Platform, and Objective Program. This condition occurred because NSA management did not consider independent and internal analyses recommending that NSA use THINTHREAD and its technologies as a risk-reduction test bed for the TRAILBLAZER Program and should include THINTHREAD in the TRAILBLAZER Analysis of Alternatives. As a result, the NSA [redacted] that will eventually be integrated with the TRAILBLAZER Objective Program. In addition, NSA may be developing parts of TRAILBLAZER Technology Demonstration Platform unnecessarily. Finally, the NSA Transformation may be developing a less capable, long-term digital network exploitation solution that will take longer and cost significantly more to develop.

(U) Congressional Concerns on Digital Network Exploitation

(U) The National Defense Authorization Act for FY 2002 stated that:

~~(TS//SI)~~ The NSA has clearly made great strides in seeking to transform itself in many areas. However, the NSA appears to have made only modest progress in the area most important to its future: acquiring the technical ability to operate effectively against the emerging global network. The NSA has long known that [redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

(U) TRAILBLAZER

~~(S//SI)~~ On March 24, 2000, the Director, NSA signed the TRAILBLAZER 1 charter to create a new Signals Intelligence enterprise to exploit the global network. TRAILBLAZER 1, with an estimated development cost of approximately [redacted], was to respond to the opportunities and challenges provided by emerging technologies to design new operational practices for on-time delivery of products and services in the manner that best met customer

NSA (b)(3) 50 USC 3605

~~(S//SI)~~ needs--unrestrained by past practices or past technologies. TRAILBLAZER 1 had the following key responsibilities

- (U//~~FOUO~~) Ensure the execution of a new NSA program transforming the U.S. Cryptologic System exploitation of the global network. Map detailed digital network exploitation mission requirements to a cryptologic architecture and implement them; and
- (U//~~FOUO~~) Act as the catalyst for transforming customer interaction and operational practices. Begin the retooling of NSA programmatically, technologically, and culturally to provide mission services and capabilities that are responsive to the emerging technology and customer needs.

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

(U) An Alternative Proposal to TRAILBLAZER

~~(S//SI)~~ In January 2001, the TRAILBLAZER Alternative Proposal identified the capabilities of the newly developed THINTHREAD system, as well as future development efforts that would meet most of the requirements in the TRAILBLAZER Statement of Objectives and its Addendum. The proposal demonstrated that the THINTHREAD Program had achieved most of the requirements in the TRAILBLAZER Statement of Objectives during site testing. The proposal contended that THINTHREAD achieved those requirements in less than 120 days and at a cost of

~~(S//SI)~~ The proposal stated that THINTHREAD was already processing a significant percentage of the digital network intelligence for the

(U//~~FOUO~~) Because of NSA management's perceptions of required architectural features, the proposal faced a number of challenges because:

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

- (U//~~FOUO~~) The implied development and deployment costs of THINTHREAD were dramatically lower, and the development schedules to satisfy TRAILBLAZER requirements were dramatically shorter than previously estimated, bringing into question the completeness of other proposals.

(~~S//SI~~) NSA did not implement the proposal. If it had been implemented or if the technical approach and breakthrough concepts developed by the THINTHREAD team were used as a risk-reduction test bed and lesson learned for TRAILBLAZER, a substantial reduction in TRAILBLAZER development costs may have resulted.

(U) NSA Modernization Studies

(~~S~~) **First NSA Modernization Study.** The House Permanent Select Committee on Intelligence directed the first "NSA Modernization Study," July 2001, which was conducted by The National Technology Alliance, National Center for Applied Technology. After a thorough review of ongoing activities within the TRAILBLAZER Program Management Office and the THINTHREAD Program Office and interviews with key program personnel, the National Center for Applied Technology team observed that the TRAILBLAZER was poorly executed and had an overly expensive [redacted] system. The NSA Modernization Study recommended that:

- (~~C~~) THINTHREAD be used as a risk-reduction test bed and provide TRAILBLAZER with lesson learned; and
- (~~C~~) THINTHREAD be considered as an alternative [redacted] system in the TRAILBLAZER Analysis of Alternatives.

(~~S//SI~~) **Second NSA Modernization Study.** A second National Center for Applied Technology report, a "quick-look" follow-on report, was completed in December 2001. The Chief, Signals Intelligence Programs invited the original study team to conduct a follow-on study to evaluate progress within the TRAILBLAZER Program Management Office. Despite noting some changes made in NSA management and the TRAILBLAZER Program acquisition strategy that promised to address the conflicts and issues noted in the first report, the study team found that:

- (U//~~FOUO~~) Signals Intelligence programs did not deploy THINTHREAD as a risk-reduction test bed and provide lessons-learned for TRAILBLAZER. In addition, Signals Intelligence management had directed that THINTHREAD resources be provided to TRAILBLAZER to support the integration of THINTHREAD technology into the TRAILBLAZER [redacted] architecture; and
- (U//~~FOUO~~) The study also recommended that THINTHREAD be considered as an alternative [redacted] system in the TRAILBLAZER Analysis of Alternatives.

(U//~~FOUO~~) The study also stated that Signals Intelligence programs would not consider THINTHREAD as an alternative framework for TRAILBLAZER and ruled out THINTHREAD as an alternative solution because it was viewed as a mission application.

(U) NSA Technical Reviews

~~(S//SI)~~ During FY 2001, NSA initial and followup internal technical reviews identified overlaps between the [redacted] subsystem architecture that was being developed and the THINTHREAD Program. The [redacted] subsystem was to be included in the TRAILBLAZER [redacted] and the TRAILBLAZER Objective Program. Both reviews concluded that THINTHREAD and its technologies should be adopted into the NSA solution to digital network exploitation. The [redacted] THINTHREAD Technical Review" stated that the requested resources in FY 2001 for the [redacted] and [redacted] of programmers. The requested resources for THINTHREAD were [redacted] and [redacted] handpicked programmers to satisfy the full request for proposal. The technical review also recommended that NSA provide the requested resources, dollars, and people to the THINTHREAD team.

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

(U) TRAILBLAZER Acquisition

~~(S//SI)~~ After spending [redacted] years and more than [redacted] on development and changes to the TRAILBLAZER acquisition strategy, NSA was unsuccessful in delivering a capability to fully exploit the global network.

(U//~~FOUO~~) **TRAILBLAZER Initial Transformation Activities.** The objective of the TRAILBLAZER Initial Transformation Activities was to provide a global network learning environment that would feed information, lessons learned, new analytic processes, and refined requirements into the TRAILBLAZER Objective Program Activities.

~~(S//SI)~~ During FY 2001, the NSA Modernization Studies identified overlaps between the TRAILBLAZER [redacted] and the THINTHREAD Program. The studies concluded that NSA was potentially developing a throwaway system by developing the TRAILBLAZER [redacted] before the TRAILBLAZER Concept Definition Phase Study Program was complete. The overall objective of the Study Program was to identify potential solutions for the global network challenge and to position the TRAILBLAZER Program for the next phase of the program acquisition. The decision by NSA management not to follow the Modernization Studies' recommendations to stop the development of the [redacted] resulted in an expenditure of approximately [redacted] for a nonoperational prototype. As stated in finding A, the Modernization Studies recommended adopting THINTHREAD as the interim solution for digital network exploitation and including THINTHREAD in the Analysis of Alternatives for TRAILBLAZER.

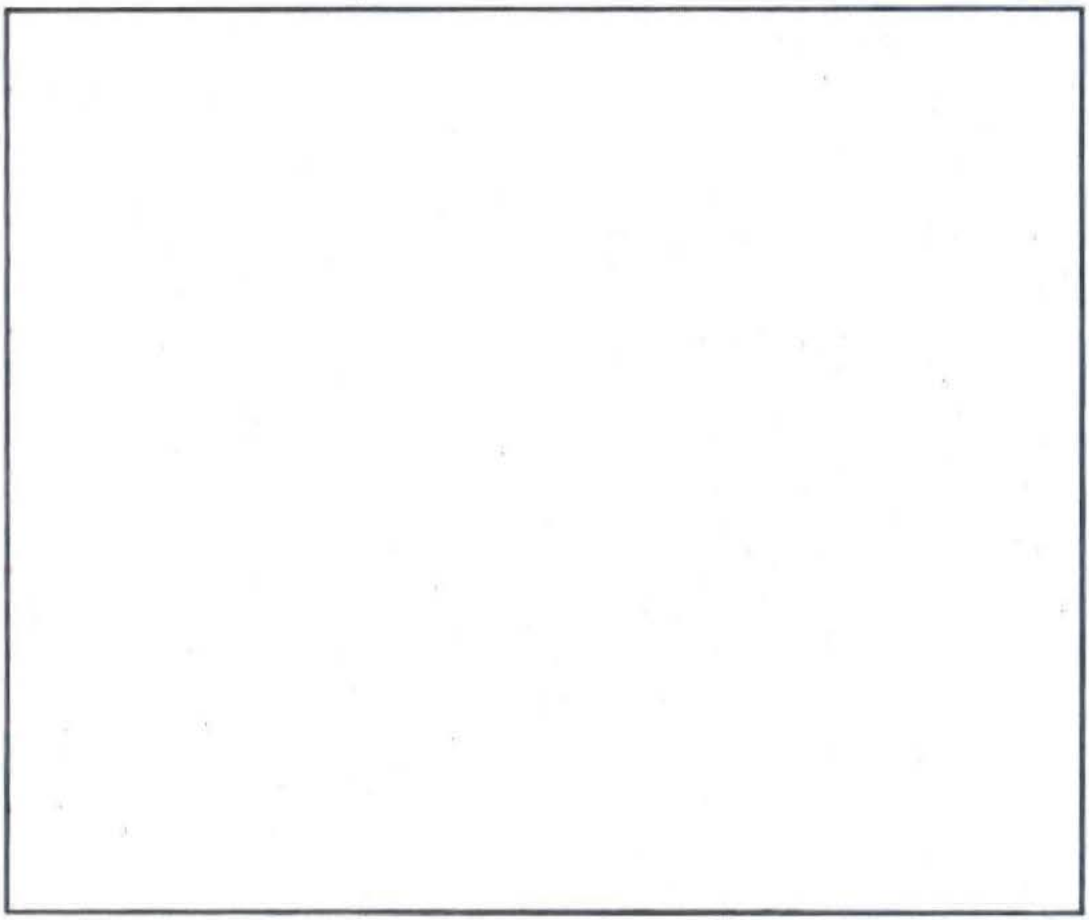
(U//~~FOUO~~) **Refining the Scope of the TRAILBLAZER Program.** The terrorist attacks against the United States on September 11, 2001, established an

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

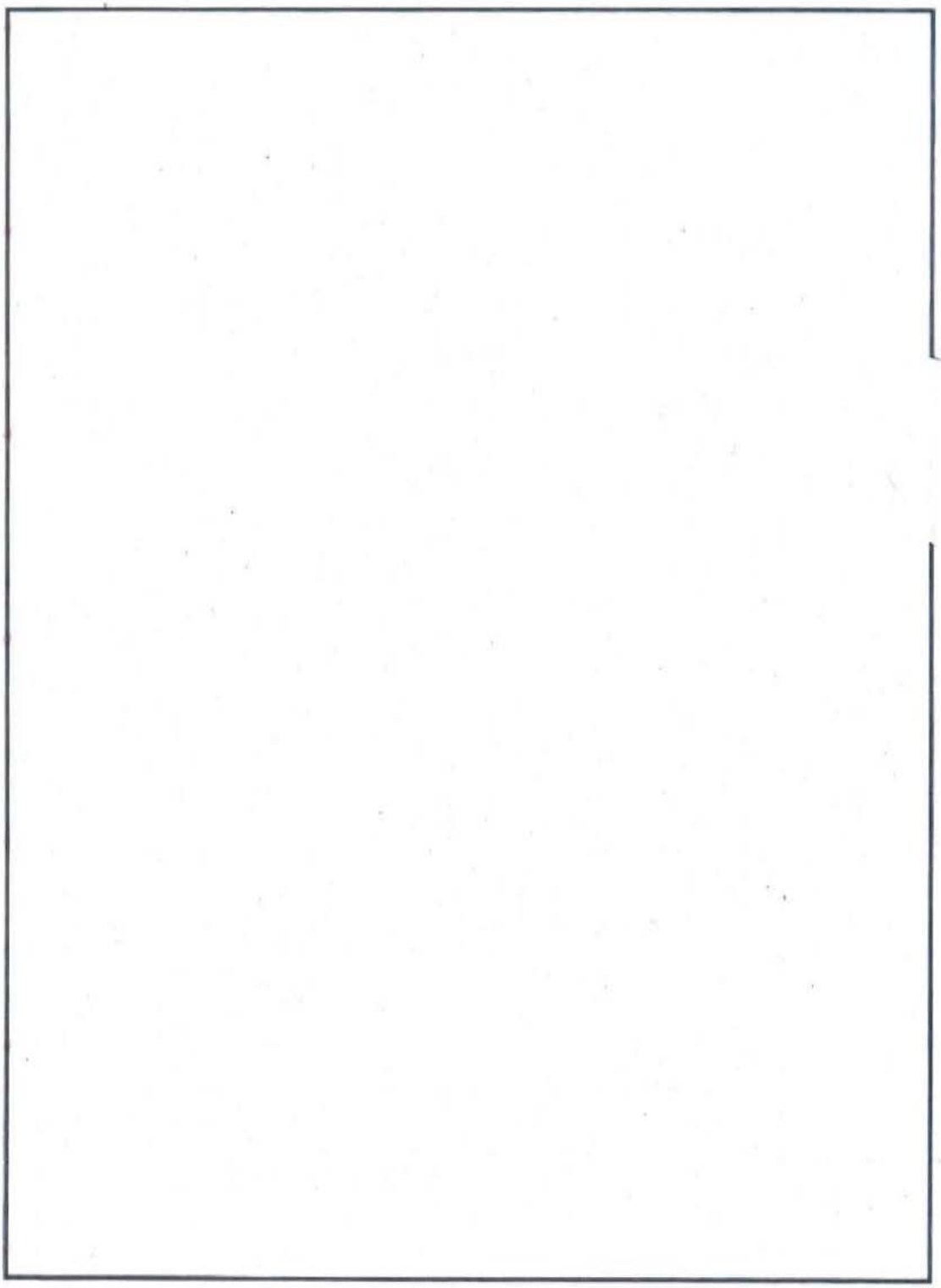
(U//FOUO) urgent mission statement for NSA to rapidly develop and field a capability for digital network exploitation. As documented in a memorandum from the Chief, Operations Requirements (Signals Intelligence) to the NSA Senior Acquisition Executive, "Urgency Statement for Global Capabilities," dated November 9, 2001, such a capability was deemed critical to effectively process, analyze, and report information from the global network. The cited memorandum documented two key decisions:

- (S) NSA must refocus the initial acquisition activities for TRAILBLAZER to counter terrorism; and
- (C) NSA must move the TRAILBLAZER Program forward swiftly to deliver the capability needed to extract information from the global network by the second quarter of FY 2003 to ensure that the United States has the advantage in the war on terrorism.

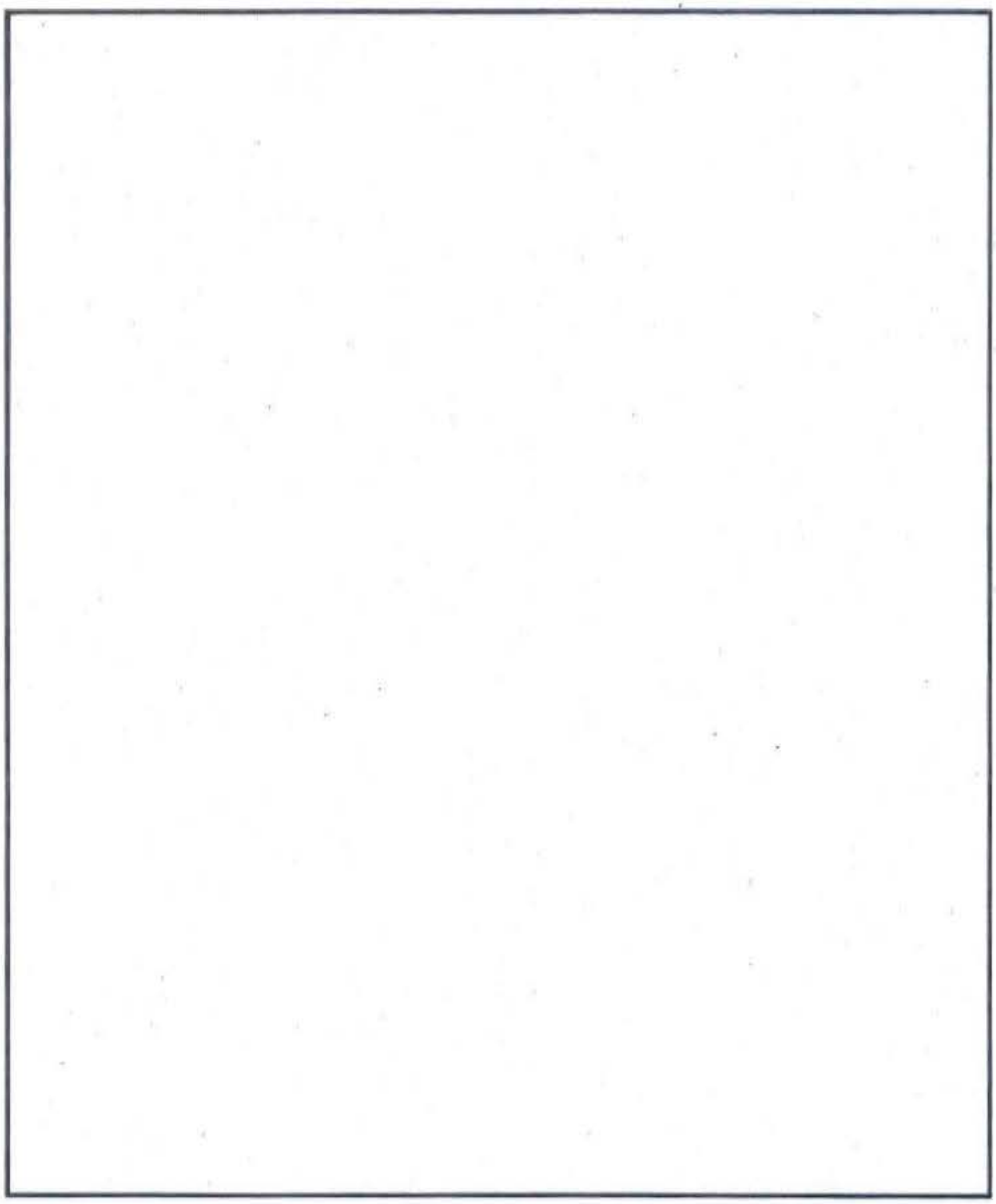
(U//FOUO) The mission statement was a key driver in the formation of the Technology Demonstration Platform. The Acquisition Review Board approved the revised acquisition strategy on November 30, 2001.

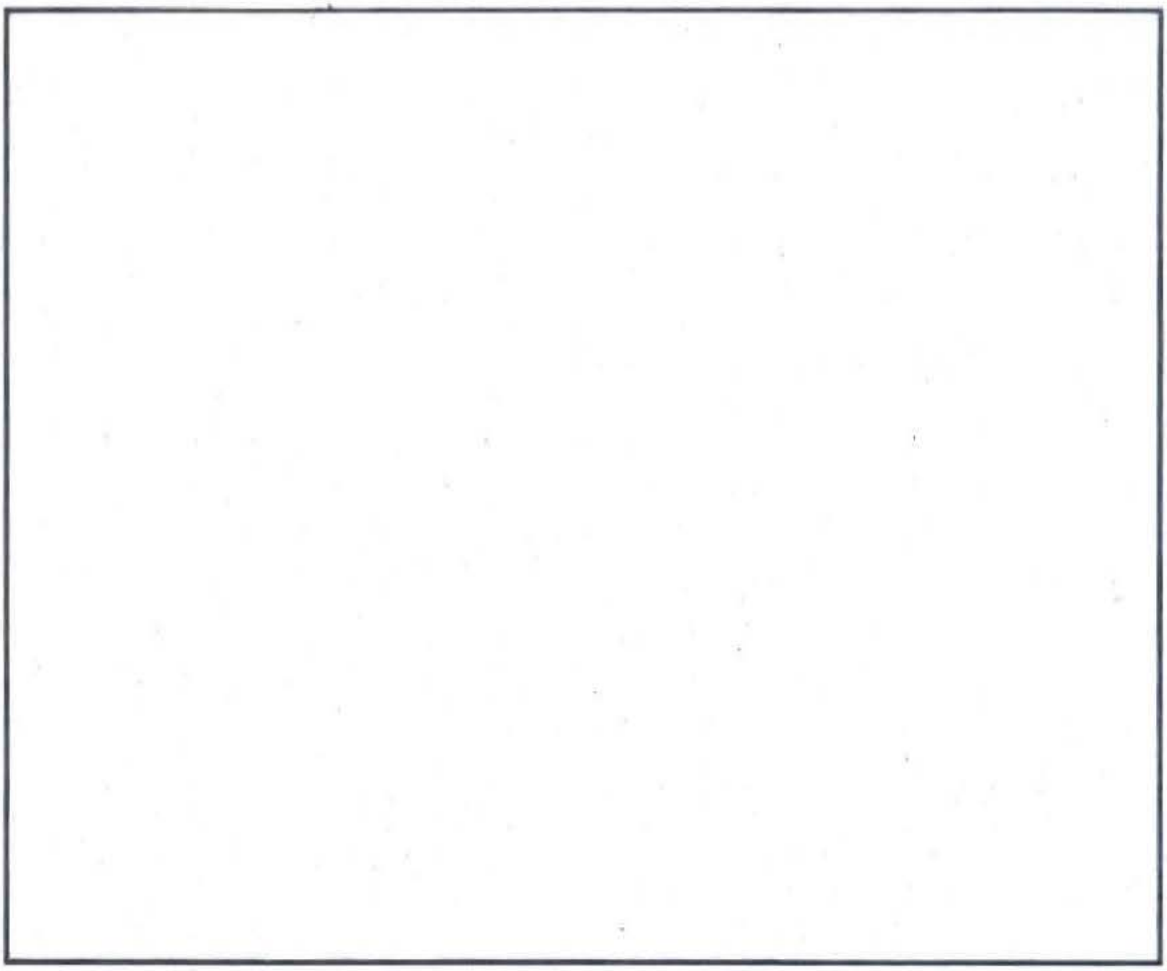


NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)



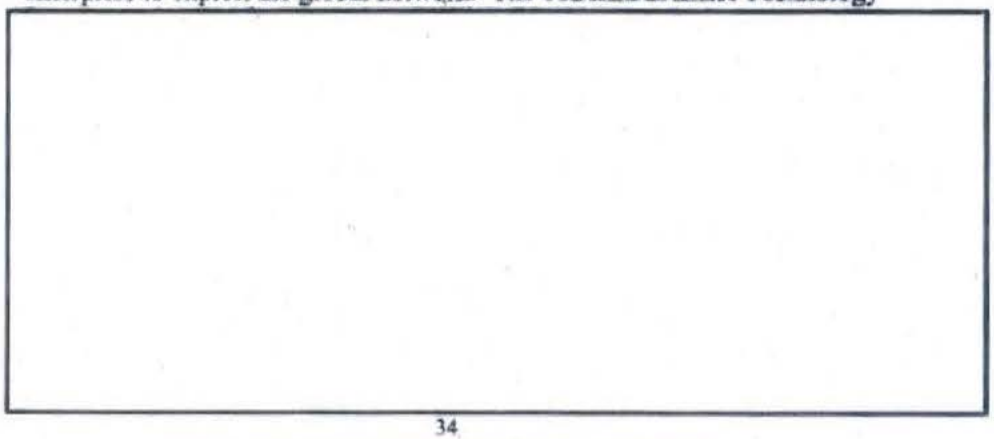
NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)





(U) Conclusion

~~(S//SI)~~ TRAILBLAZER was developed to create a new Signals Intelligence enterprise to exploit the global network. The TRAILBLAZER Technology



. The studies recommended that THINTHREAD be considered as an alternative system in the TRAILBLAZER Analysis of Alternatives, but because NSA did not consider THINTHREAD as a viable long-term solution, it did not include THINTHREAD in the Analysis of Alternatives. As a good business practice, the NSA should reevaluate THINTHREAD as the long-term solution to exploit the global network, because NSA may be unnecessarily developing the subsystem and parts of or all of TRAILBLAZER Technology Demonstration Platform. NSA management should consider implementing the following recommendations before continuing the development of the Technology Demonstration Platform.

(U) Summary of Management Comments on the Audit Finding and Audit Response

(U//~~FOUO~~) Management Comments. NSA management referred to several statements in the report that did not include all referenced documents and that some paragraphs contained wrong or misleading information. The complete list of management comments is located in the Management Comments section of this report.

(U//~~FOUO~~) Audit Response. We obtained, reviewed, and analyzed many documents to form the basis for the conclusions in this report. We also interviewed several NSA and contractor personnel, many of whom asked not to be identified for fear of management reprisal. We gathered information from many sources to support the finding. Paragraphs frequently contain information from several sources to reinforce conclusions. See Appendix J for a complete audit response to each management comment.

(U) Recommendations, Management Comments, and Audit Response

(~~S~~) Revised Recommendation. As a result of management comments, we revised Recommendations B.1 and B.3 to clarify the intended use of THINTHREAD as a system.

1. (U//~~FOUO~~) We recommend that the Director, National Security Agency/Chief, Central Security Service:

- **(~~S~~) Designate a team to assess the ability of THINTHREAD or its technologies as a long-term solution to meet the requirements for the TRAILBLAZER Technology Demonstration Platform.**

(U//~~FOUO~~) Management Comments. The Director, National Security Agency/Chief, Central Security Service partially concurred with the intent of the recommendation but was waiting for the results of a cost and schedule impact study before fully concurring. The Program Executive Office is establishing an

NSA (b)(3) 50 USC 3605

(U//~~FOUO~~) independent review team to complete the study before Milestone B, scheduled for December 2004, because the study will have an effect on both the cost and schedule for Milestone B.

(~~S//SI~~) Management stated that there were significant differences between THINTHREAD and TRAILBLAZER. THINTHREAD is a digital network information processor and will provide capabilities to support analysts' activities. TRAILBLAZER will provide the enterprise wide set of digital network requirements. The information technology framework will host and integrate mission applications.

~~(C)~~ Audit Response. Based on management comments, we revised this recommendation. The Director, National Security Agency/Chief, Central Security Service comments were responsive and the proposed actions meet the intent of the recommendation. The immediate actions taken to designate an independent review team to perform the assessment are commendable. Milestone B has slipped to February 2005 at the earliest; therefore, NSA will have time to complete the assessment of THINTHREAD or its technologies as a long-term solution to meet the [redacted] requirements of TRAILBLAZER. We request that the Director, National Security Agency/Chief, Central Security Service provide a risk mitigation plan for cost and schedule requirements and provide comments on a final concurrence.

2. (U//~~FOUO~~) Provide the results of the external assessment to the TRAILBLAZER Technology Demonstration Platform Milestone Decision Authority for use in making the Milestone B decision.

(U//~~FOUO~~) Management Comments. The Director, National Security Agency/Chief, Central Security Service concurred. The completion of the independent assessment is currently scheduled for December 2004.

(U//~~FOUO~~) Audit Response. Although the Director, National Security Agency/Chief, Central Security Service concurred, the concurrence is based on completing the assessment requested in Recommendation B.1. We request that the National Security Agency management provide additional comments in response to the final report identifying NSA plans to eliminate the cost and schedule risks for completing the assessment.

3. (~~C~~) Include THINTHREAD as an alternate [redacted] system in the TRAILBLAZER Analysis of Alternatives required for Milestone B.

(U//~~FOUO~~) Management Comments. The Director, National Security Agency/Chief, Central Security Service concurred, and stated that the assessment required in Recommendation B.1 will be included in the Analysis of Alternatives for Milestone B, scheduled for December 2004.

~~(S//SI)~~ Audit Response. Although the Director, National Security Agency/Chief, Central Security Service concurred, the concurrence is based on completing the assessment requested in Recommendation B.1. Based on management comments to Recommendation B.2., this recommendation was revised to include THINTHREAD as an alternate digital network information [redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

~~(S//SI)~~ system that TRAILBLAZER will host. We request additional comments in response to the final report identifying NSA plans to eliminate the cost and schedule risks for completing the assessment.

Appendix A. Scope and Methodology (U)

(U//~~FOUO~~) We reviewed documentation dating from November 2000 through October 2003 including background information, mission and operational need statements, concepts and operational requirements, and contracting and budget documents. Also, we conducted interviews with program managers, analysts, and technicians responsible for the acquisition and deployment process of the THINTHREAD and TRAILBLAZER programs. Specifically, we reviewed the extent to which the NSA considered the use and deployment of the THINTHREAD system to satisfy an urgent security requirements need.

(U) We performed this audit from April 2003 through May 2004 in accordance with generally accepted government auditing standards.

(U//~~FOUO~~) Limitation to Scope. Because our objective was limited to evaluating a Defense Hotline allegation relating to the acquisition of the TRAILBLAZER and THINTHREAD programs, we did not review the management control program.

(U) Use of Computer-Processed Data. We did not use computer-processed data to perform this audit.

(U//~~FOUO~~) Use of Technical Assistance. Audit Follow-up and Technical Support Personnel assisted us during the audit. The Technical Assessment Division assisted in the analysis of NSA acquisition and deployment of Signals Intelligence systems.

(U) General Accounting Office High-Risk Area. The General Accounting Office has identified several high-risk areas in DoD. This report provides coverage of the Infrastructure Inefficiencies and Information Technology Investments high-risk areas.

(U) Prior Coverage

(U//FOUO) During the last 5 years, the Inspector General of the NSA issued one report on TRAILBLAZER that discussed improperly based contract cost increases, non-conformance in the management of the Statement of Work, and excessive labor rates for contractor personnel. No prior coverage has been conducted on the NSA THINTHREAD Program during the last 5 years.

(U) Inspector General, NSA

(U//~~FOUO~~) Report No. ST-03-0014, "TRAILBLAZER I/SIGINT Programs Systems Engineering and Technical Assistance Contract," September 30, 2004

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

Appendix B. TRAILBLAZER (U)

(U) Objectives of TRAILBLAZER and the Technical Demonstration Platform

(U//~~FOUO~~) The following is a list of new capabilities to be provided by the TRAILBLAZER Technical Demonstration Platform.

(U//~~FOUO~~) The use of a scalable, integrated, plug-and-play framework will allow the Signals Intelligence System to operate with the speed and flexibility required to follow NSA targets in today's modern, global network environment.

~~(S//SI)~~ Specifically, the TRAILBLAZER framework must leverage the best commercial technology and practices. It also must be standards based to accommodate mission applications as defined by the mission managers and scalable to meet future challenges that were not well-defined.

[redacted]

[redacted] Lastly, the TRAILBLAZER offeror will integrate applications provided by mission managers and will establish clear standards and repeatable processes [redacted]

[redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

[redacted]

NSA (b)(3) 50 USC 3605

Appendix C.

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

Tiger Team," Final Report (U//~~FOUO~~)

(U) Existing Deficiencies

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

NSA (b)(3) 50 USC 3605

(U) Technical Deficiencies

(U) Operational Deficiencies

(U//~~FOUO~~) This section discusses the NSA operational deficiencies.

[1] (U//~~FOUO~~)

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

(U) Deficiencies in [redacted] Developmental Efforts

(U//~~FOUO~~) This section discusses deficiencies in the development of [redacted] systems and those functional gaps where [redacted] resources or energy are insufficient.

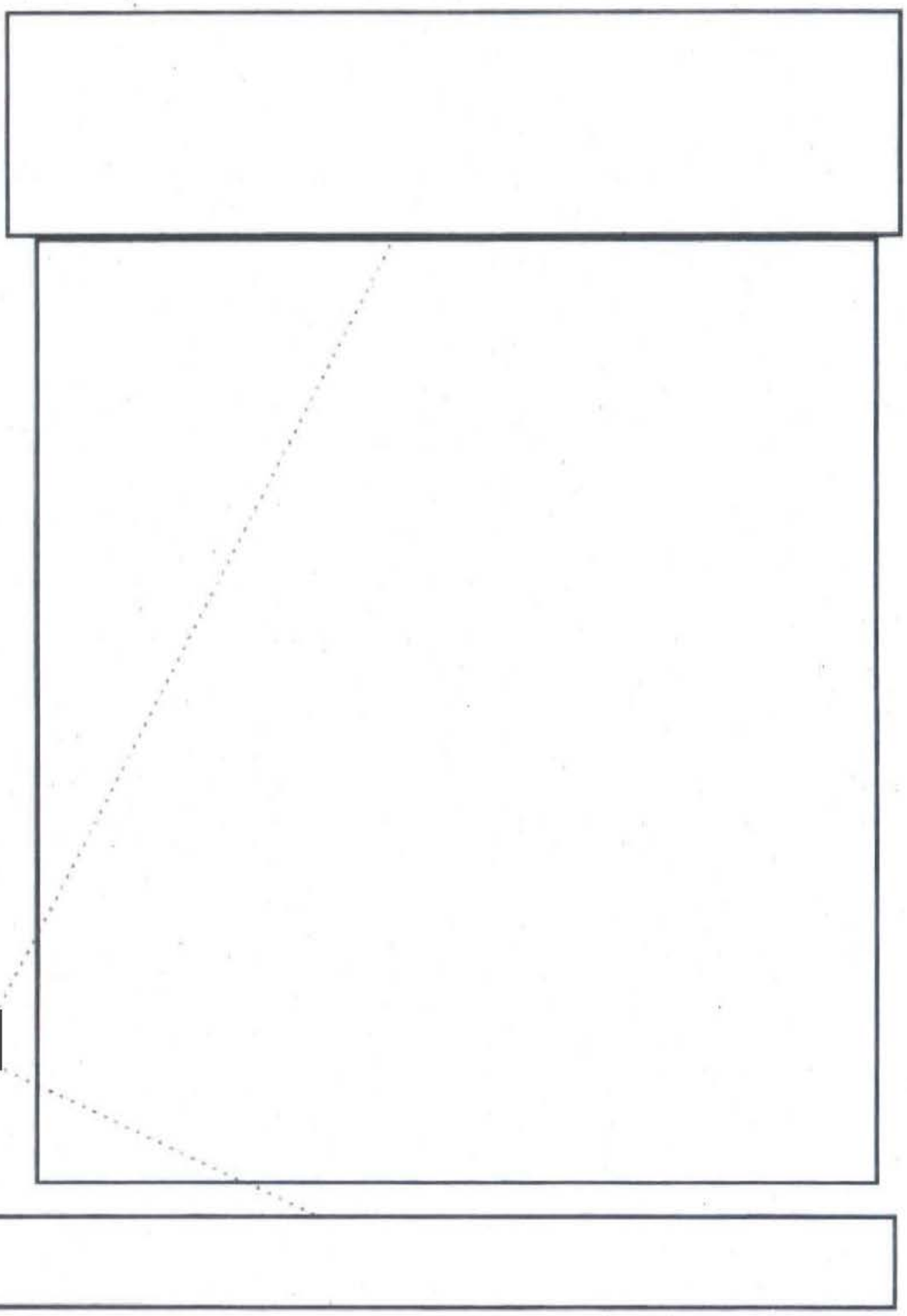
NSA (b)(3) 50 USC 3605

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

c. **(C) Oversight and compliance approval process.** A common, consistent, and cohesive oversight and compliance approval process from a U.S. Signals Intelligence Directorate 18 perspective must exist throughout the entire signals intelligence system, for the tasking of all

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)



NSA (b)(3) 50 USC 3605

NSA (b)(3) 50 USC 3605

(U) Vision for [redacted] Systems

[redacted]

demand.

[redacted]

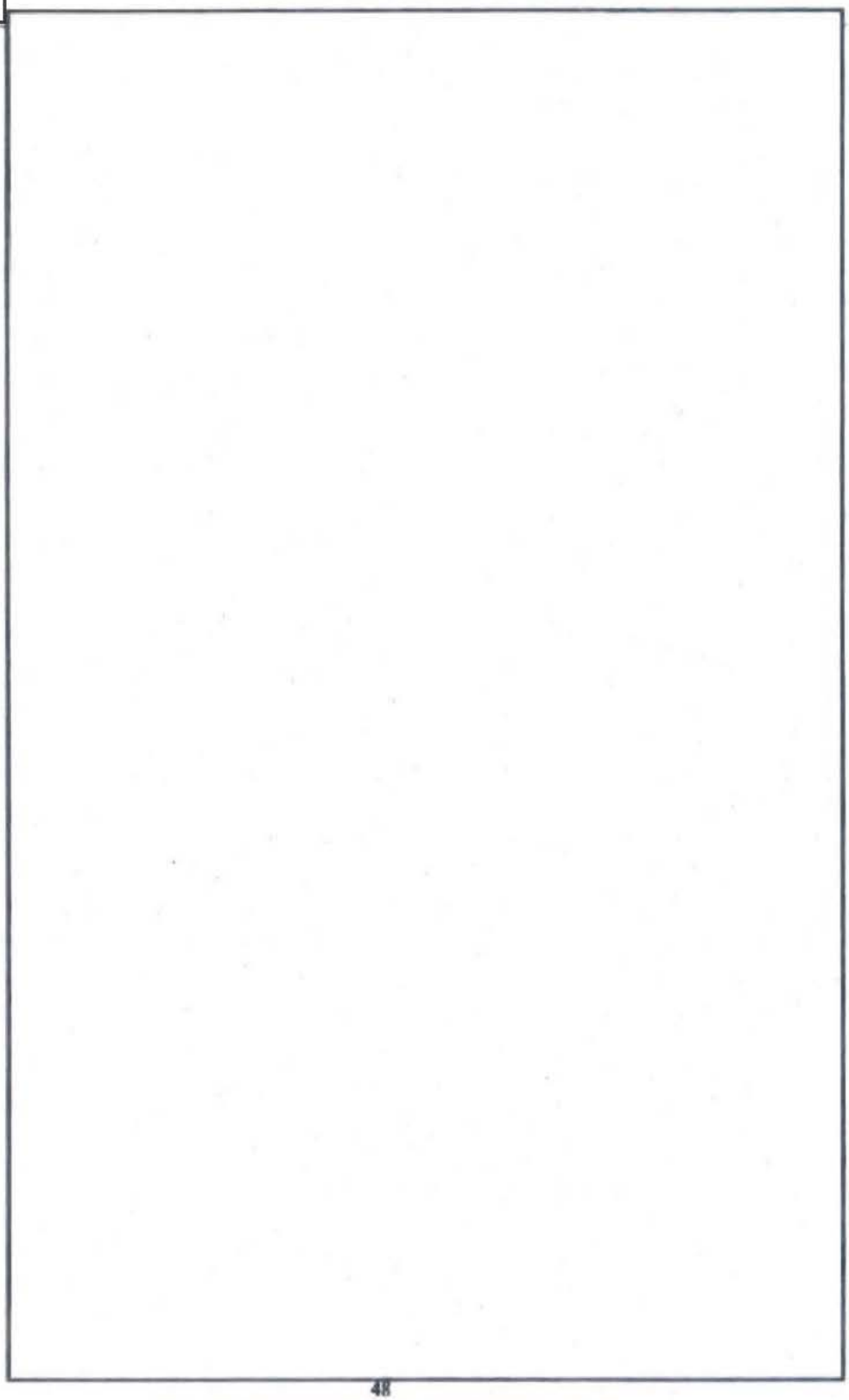
NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

(U) Technical Recommendations

(U) The Tiger Team made the following recommendation.

[redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

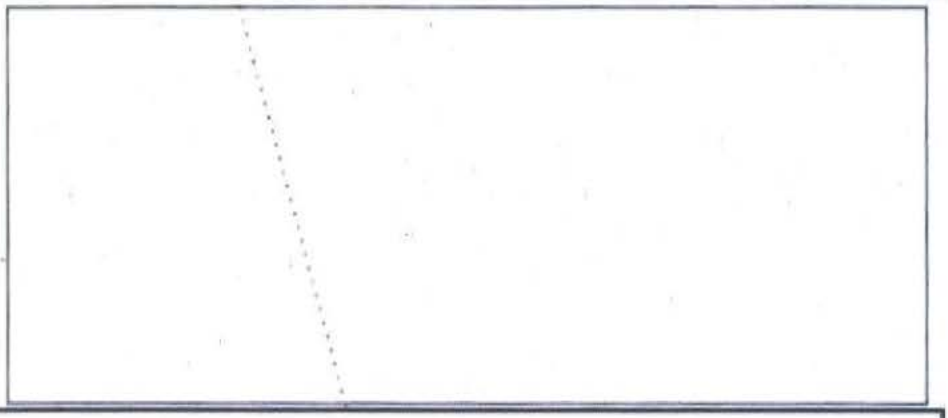


NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

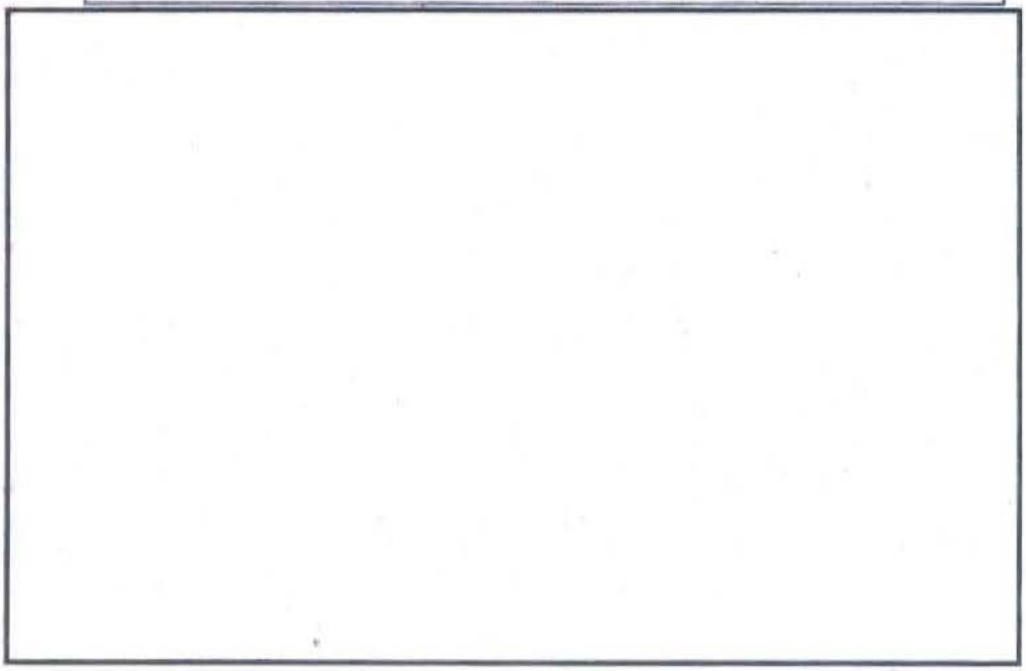
NSA (b)(3) 50 USC 3605

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

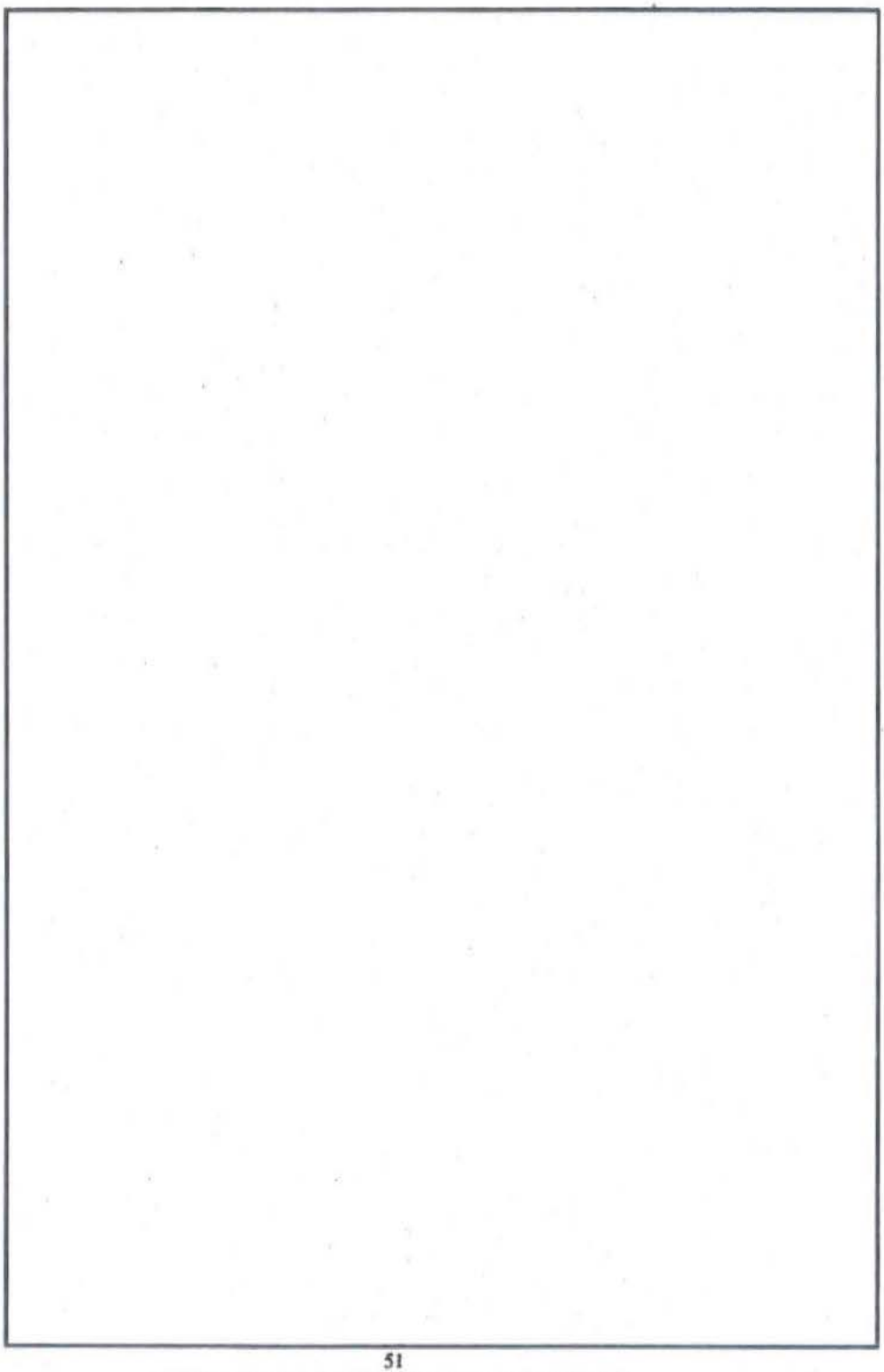




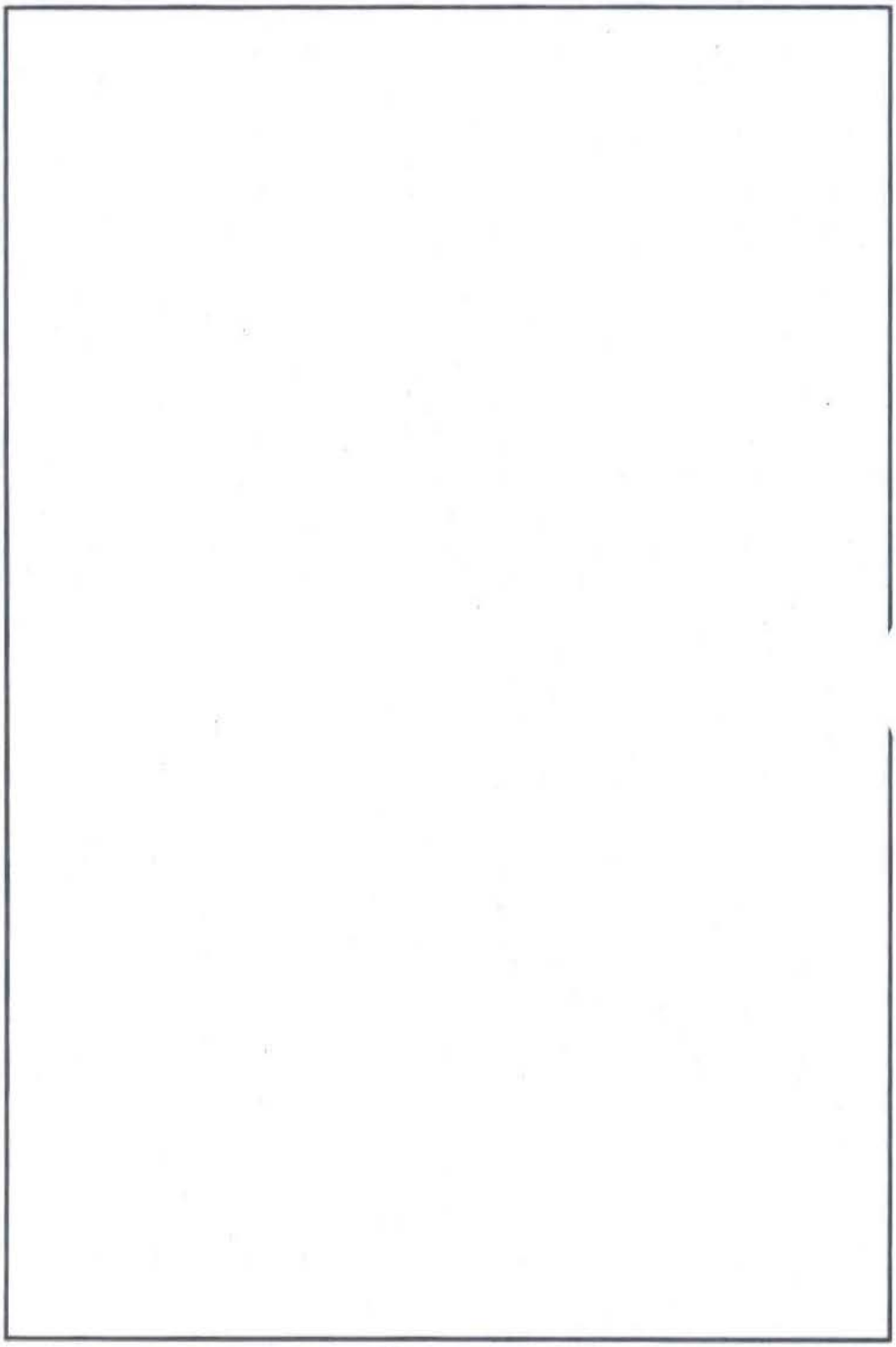
NSA (b)(3) 50 USC 3605



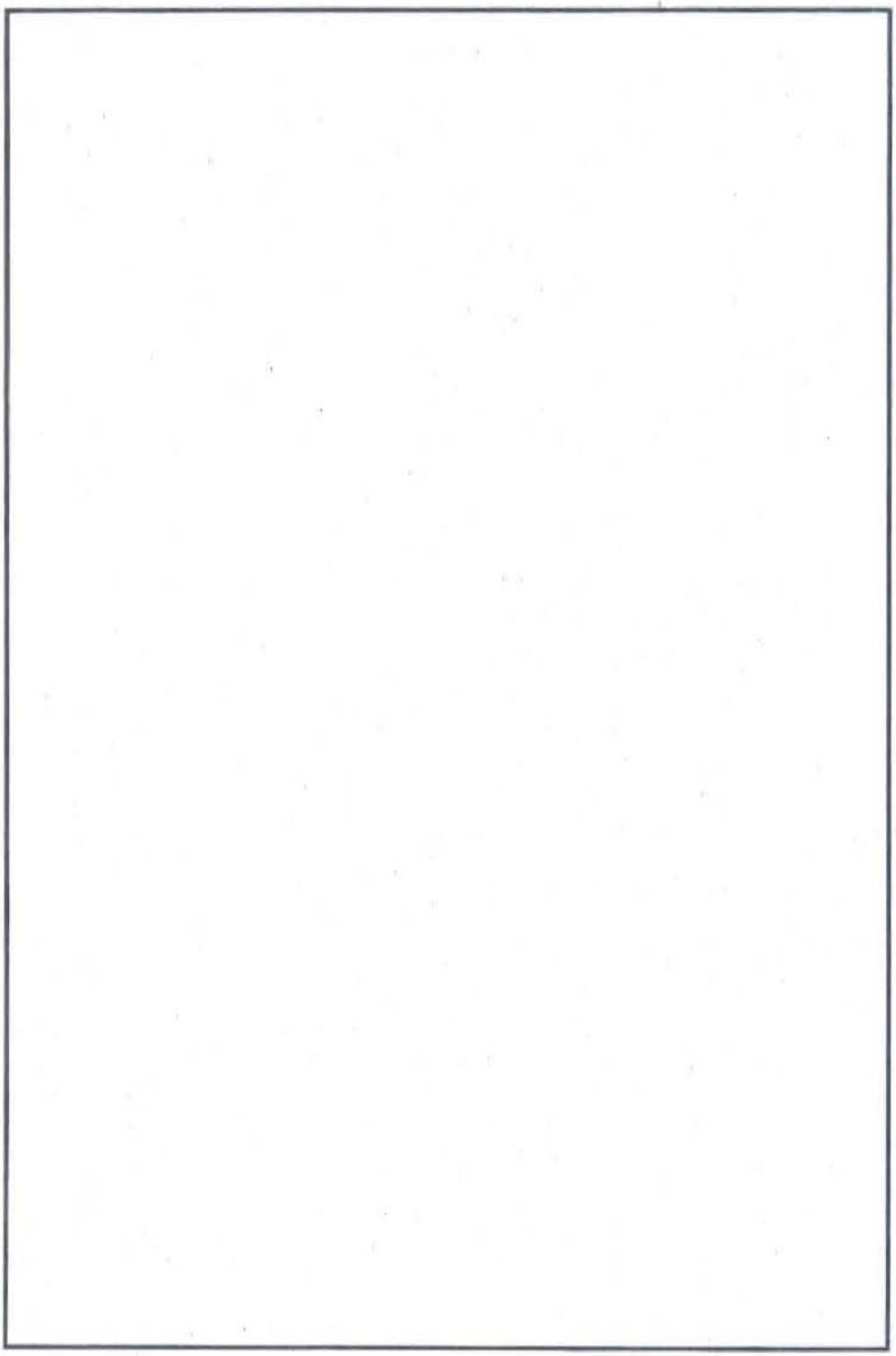
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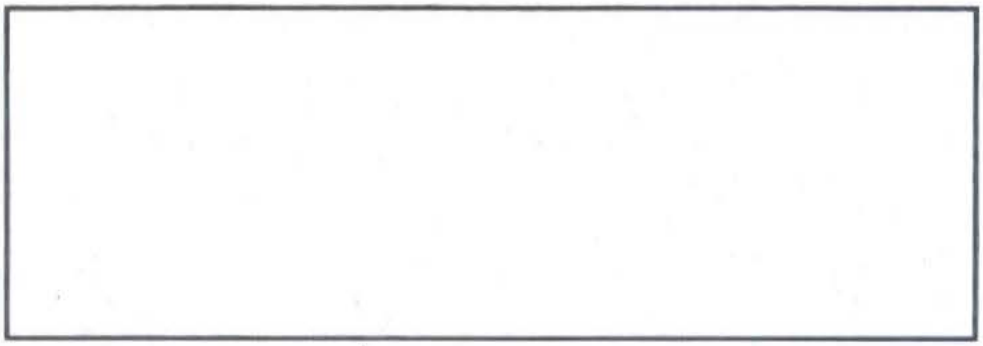


NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)



NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)





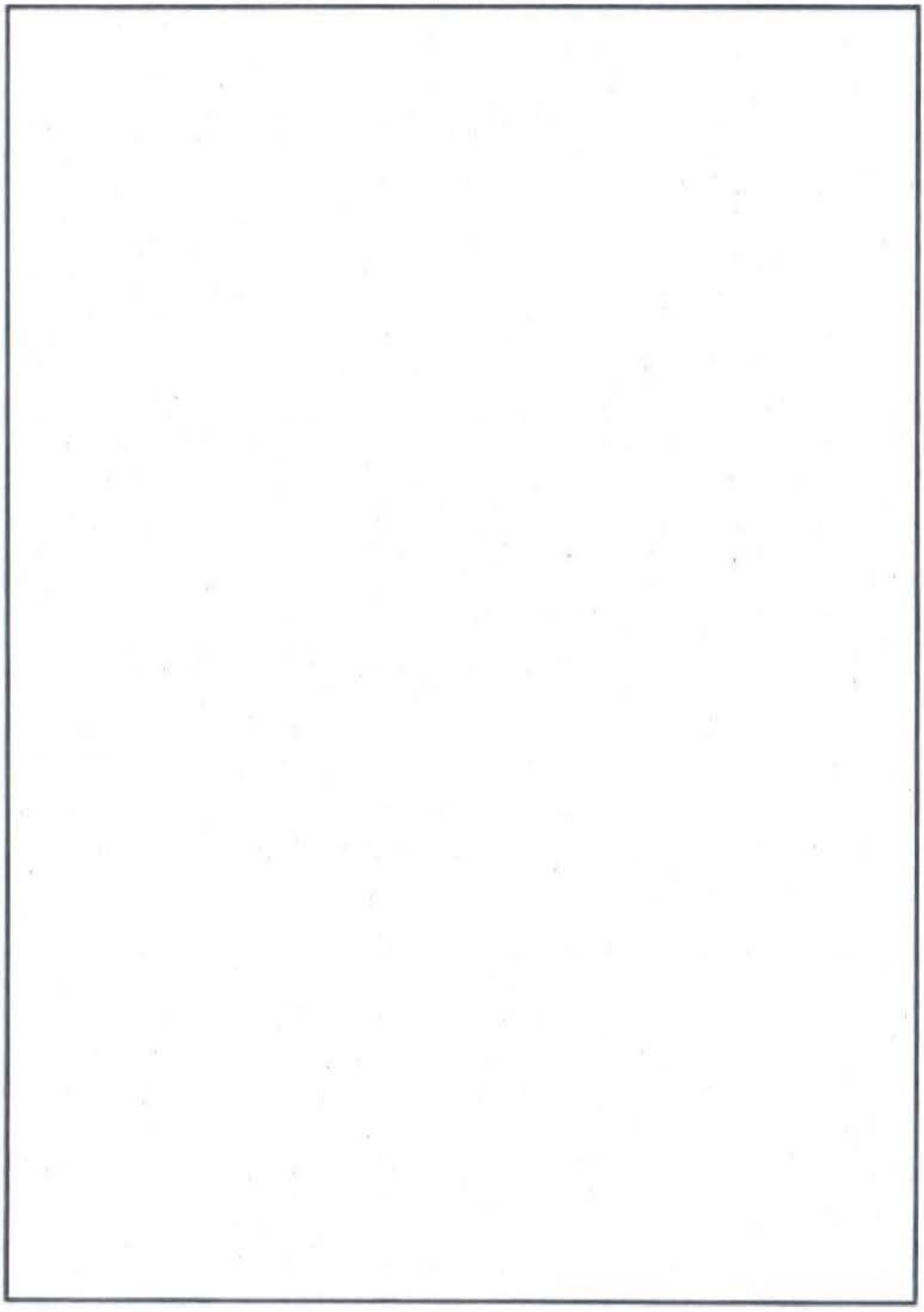
NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

Appendix D. Comparison of TRAILBLAZER, [redacted] and THINTHREAD Development Approaches, Capabilities, Cost, and Support Requirements (U)

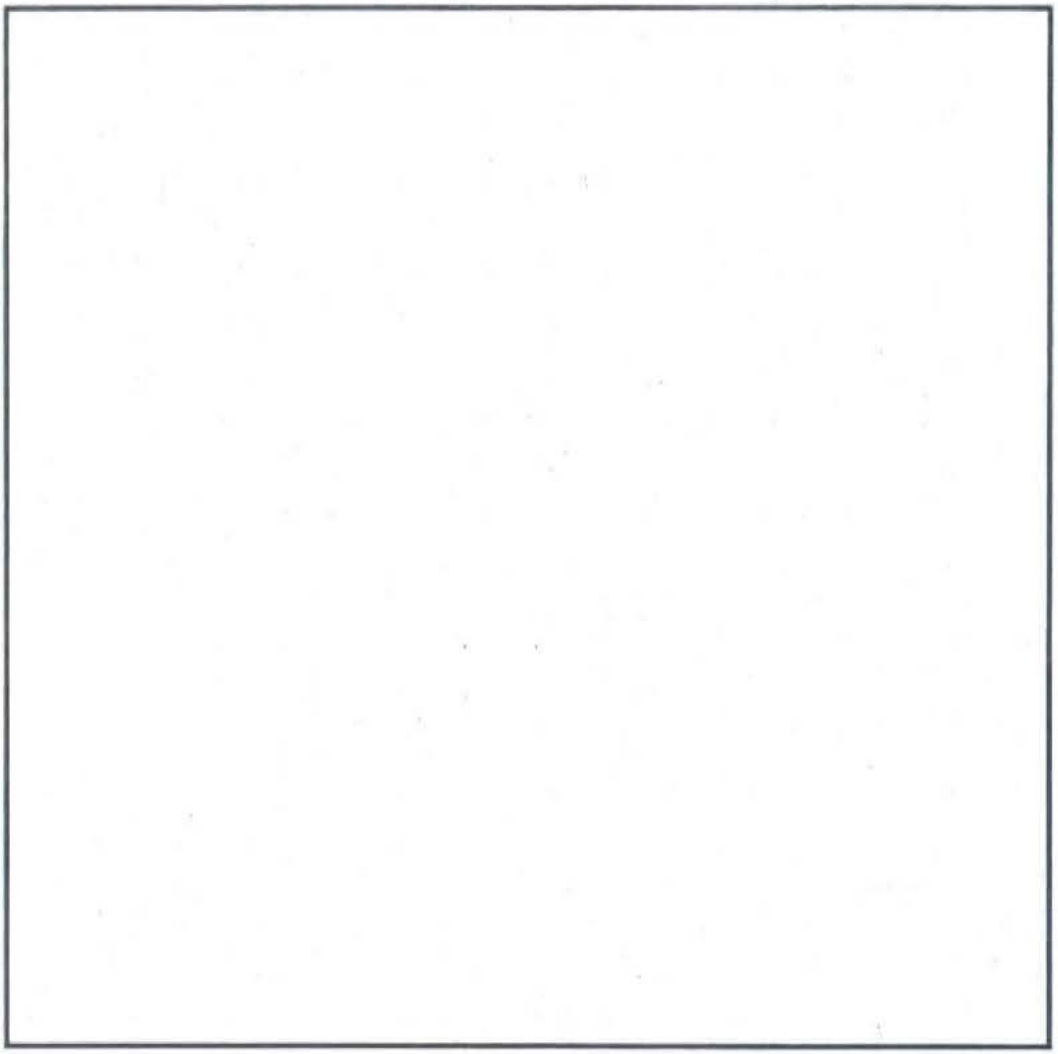
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[redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

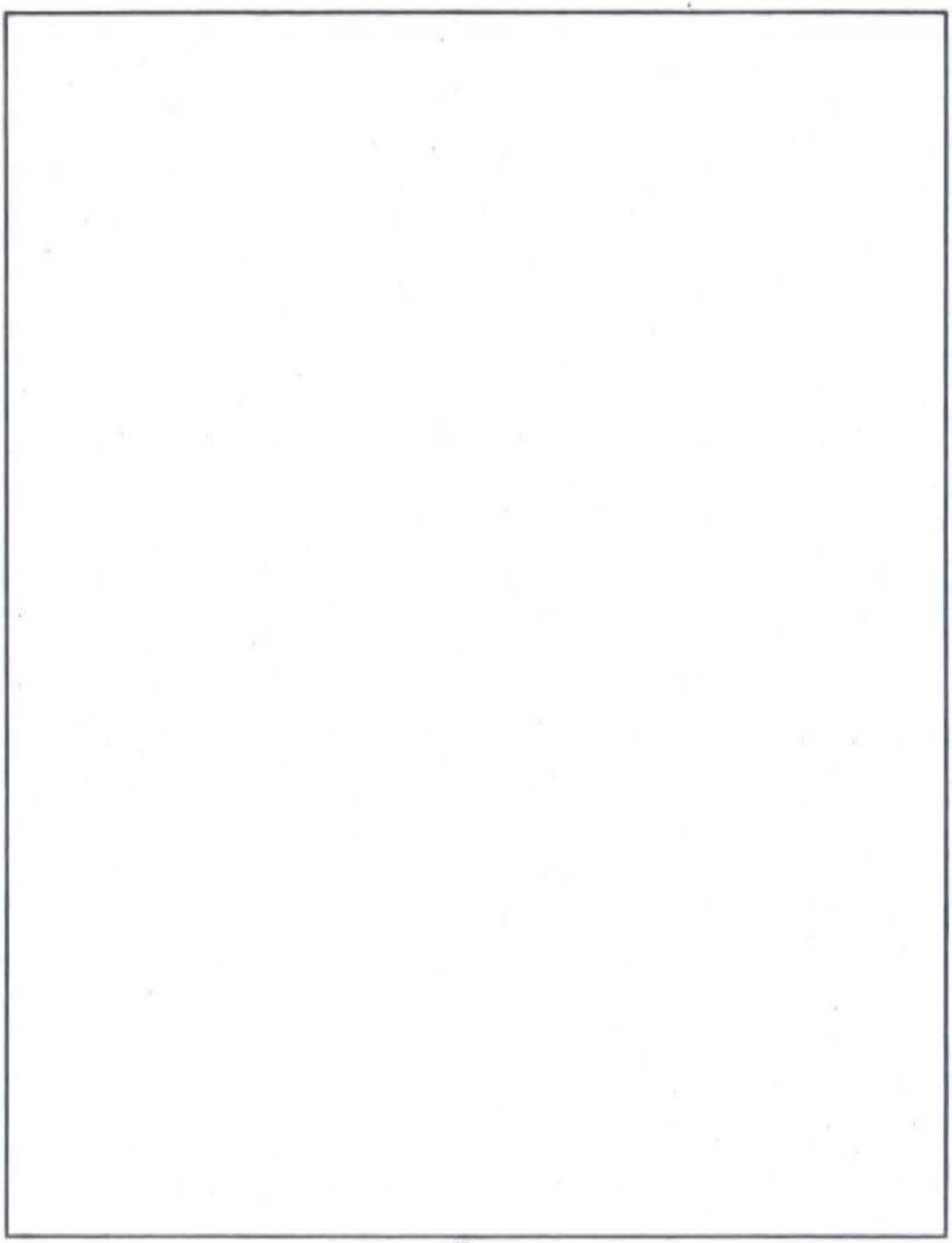


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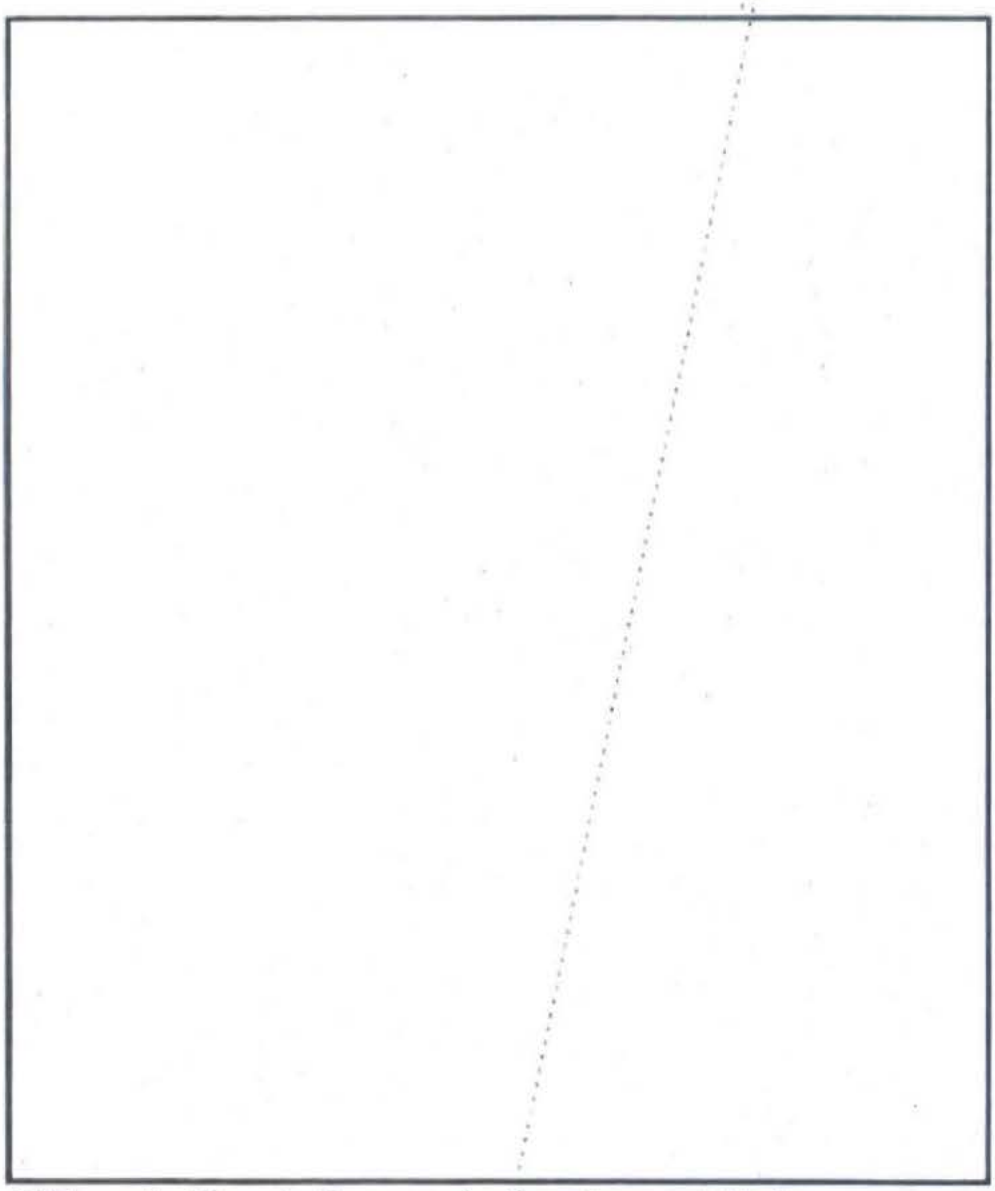


NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

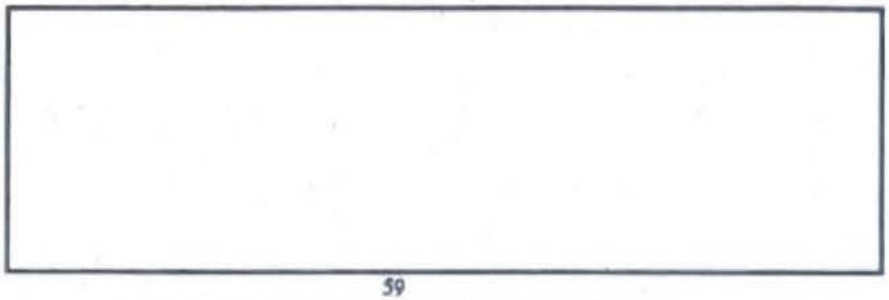
Appendix E. THINTHREAD (U)



NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605



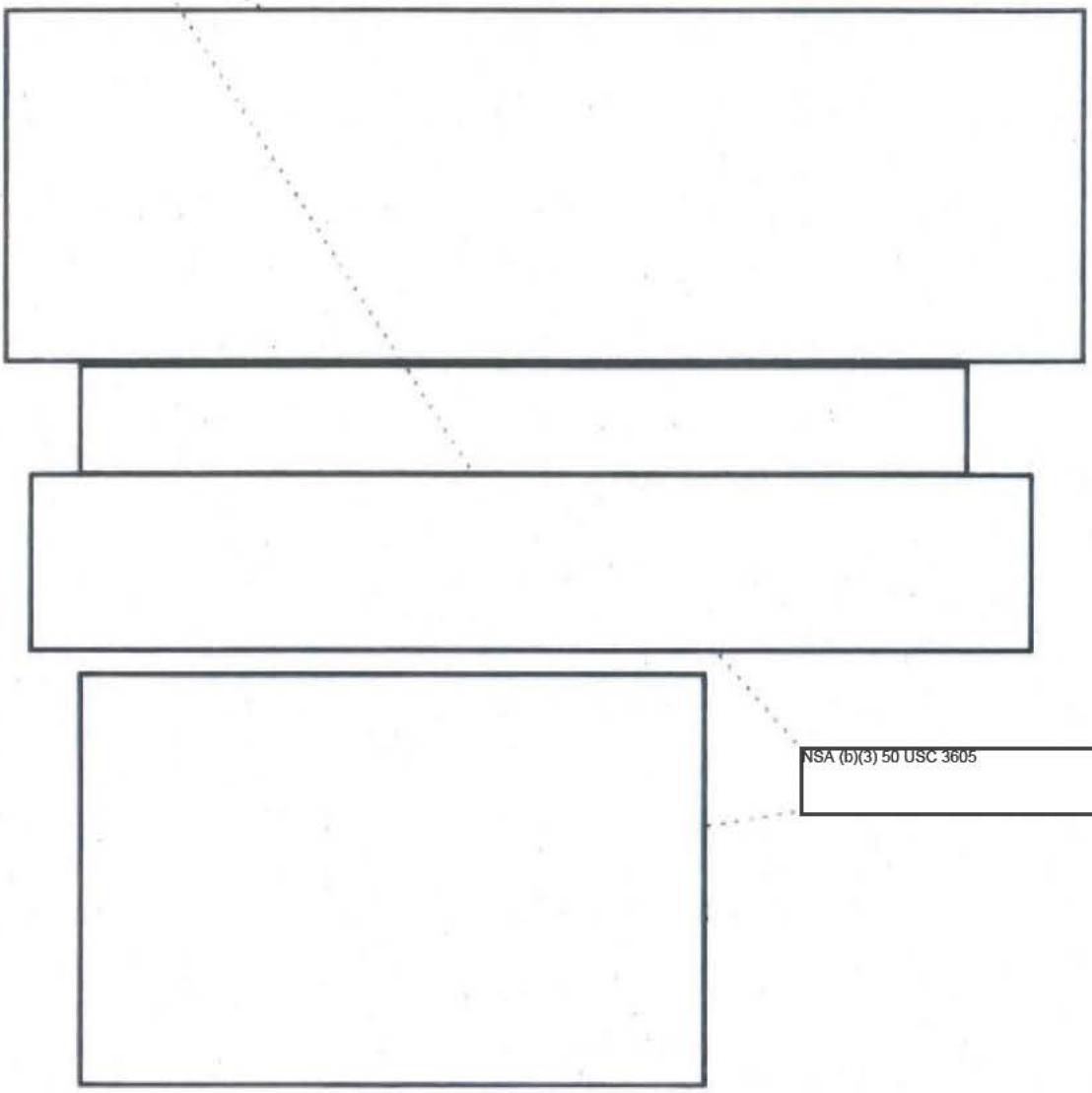
(U) Processing Elements. Five processing elements are needed in the architecture:



NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

NSA (b)(3) 50 USC 3605

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605



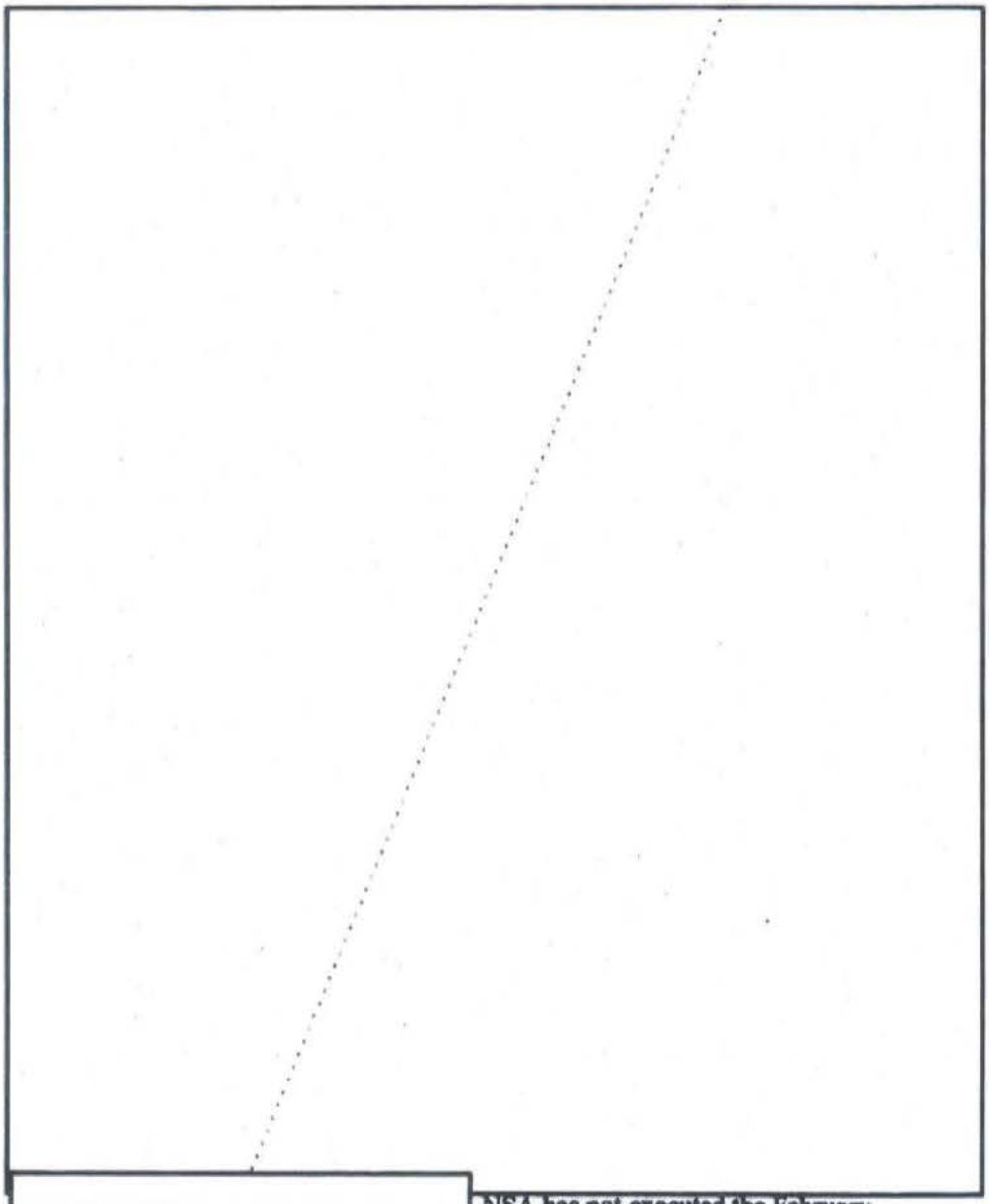
NSA (b)(3) 50 USC 3605

Appendix F. Technical Studies (U)

(U//~~FOUO~~) / THINTHREAD Technical Review

(U//~~FOUO~~) The purpose of the " / THINTHREAD Technical Review," February 2001 and the " / THINTHREAD Follow-up for D/DIR," March 2001, was to identify similarities and differences between TRAILBLAZER and THINTHREAD. Areas assessed were performance, resources, maintainability, scalability, and the ability to meet mission requirements. The study showed that there were significant overlaps in effort because both programs were solving the same mission. The major boundaries were similar, but the approach and philosophy differed. The following was extracted from those reports.

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605



NSA has not executed the February 2001 guidance by the Deputy Director to provide development and deployment resources. For example, the THINTHREAD innovation laboratory was out of funds even though it was promised [redacted] o continue development. Also, THINTHREAD contractors were let go and no further progress had been made. There was a shut down of TRAILBLAZER learning opportunities and there was a termination of alternative THINTHREAD approaches to the mission.

NSA (b)(3) 50 USC 3605

NSA (b)(3) 50 USC 3605

(U//~~FOUO~~) **Summary of Study Recommendations.** The following is complete list of recommendations of the [redacted] / THINTHREAD Technical Review:

[redacted]

- (U//~~FOUO~~) Provide requested resources to the THINTHREAD team (dollars and people)
- (U//~~FOUO~~) Provide THINTHREAD proper management support
- (U//~~FOUO~~) In light of this, not all of the [redacted] system is required

(~~S//SI~~) THINTHREAD has the capability to perform the digital network exploitation mission. The digital network exploitation operational mission could be completed entirely with [redacted]

[redacted]

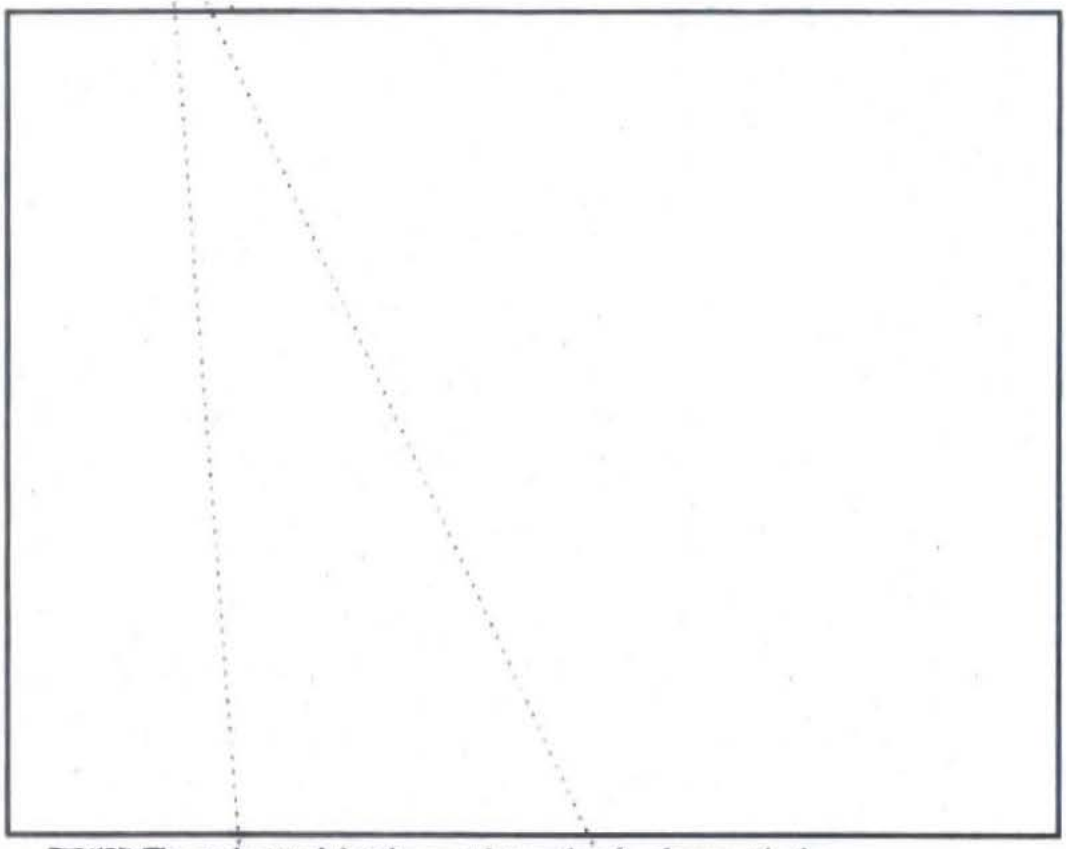
(U) NSA Modernization Follow-Up Study

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

(~~S//SI~~) The "NSA Modernization Study," July 13, 2001, and the "NSA Modernization Follow Up Study," December 2001, stated that THINTHREAD,

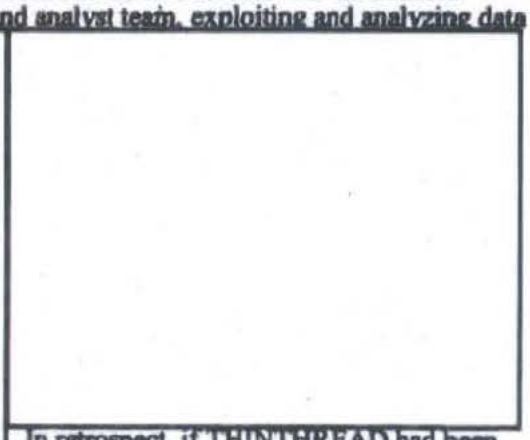
[redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)



~~(S//SI)~~ The study stated that the most interesting development in the THINTHREAD story that occurred between the two studies was the success achieved by *one* dedicated analyst and analyst team, exploiting and analyzing data





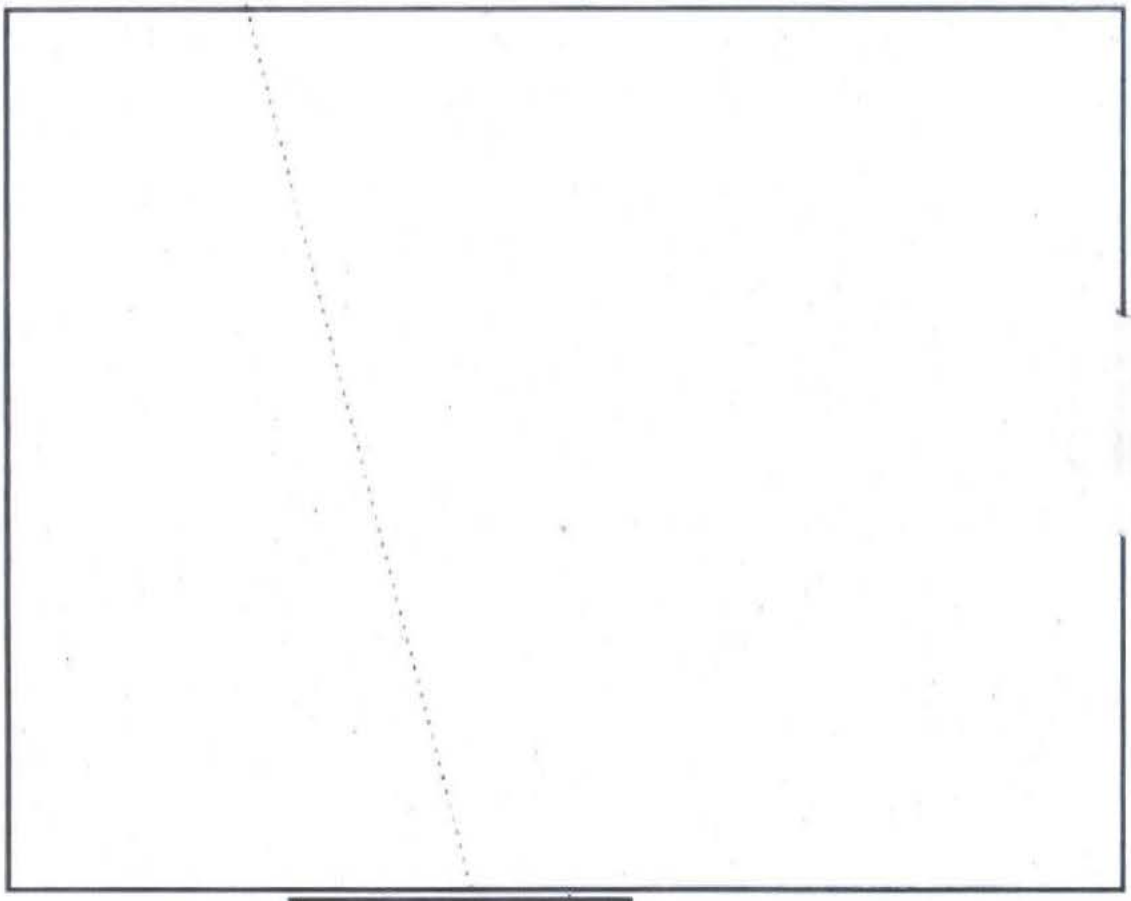
In retrospect, if THINTHREAD had been given additional resources and access to the analytic community, the "who, what, why" equation may have been refined earlier.

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

NSA (b)(3) 50 USC 3605

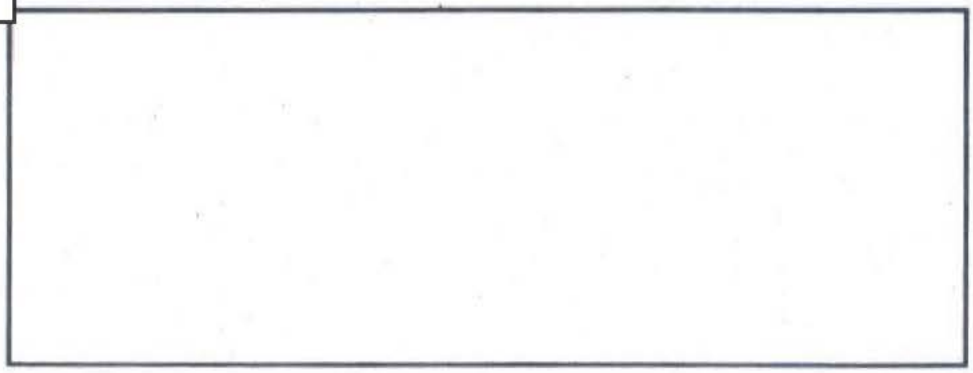
(U//~~FOUO~~) Project [redacted] Trial.

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

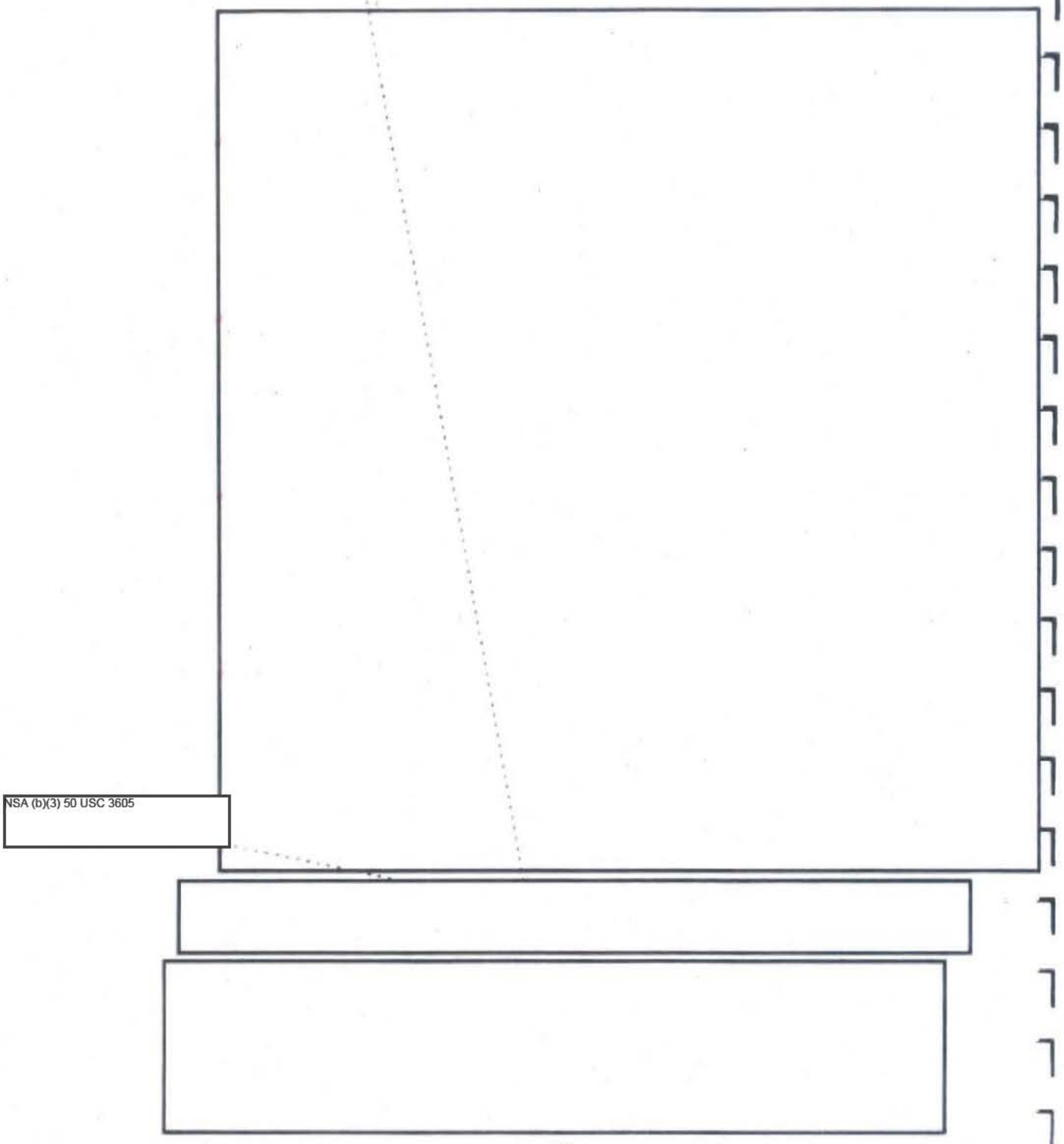


(S) Although the [redacted] was unsuitable, it is only a minor part of the system and would not be used in a future system. Similar functionality would be provided through the [redacted]. However, despite this, [redacted] was not competent at [redacted] and had some reliability issues.

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605



NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

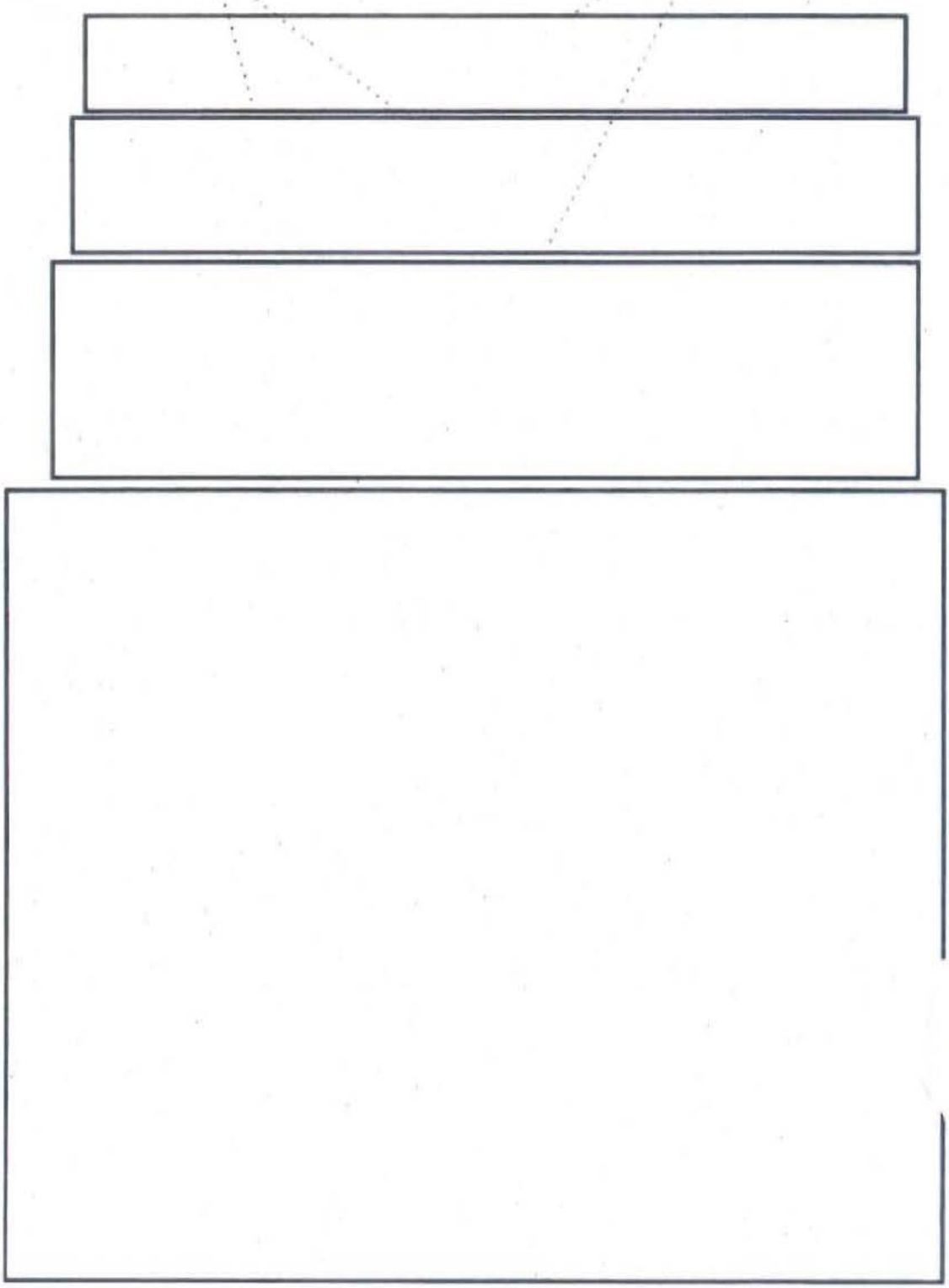


NSA (b)(3) 50 USC 3605

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

NSA (b)(3) 50 USC 3605

~~TOP SECRET//COMINT//20291123~~



[redacted]

~~(S//SI)~~ [redacted] The main advantage of [redacted] is that NSA is developing, testing and deploying it; it would be reasonably cheap to procure requiring only hardware and no development costs; it integrates well [redacted]

NSA (b)(3) 50 USC 3605

[redacted] Adopting [redacted] would give [redacted] an opportunity to stop digital network intelligence development work and benefit from the savings that would be provided.

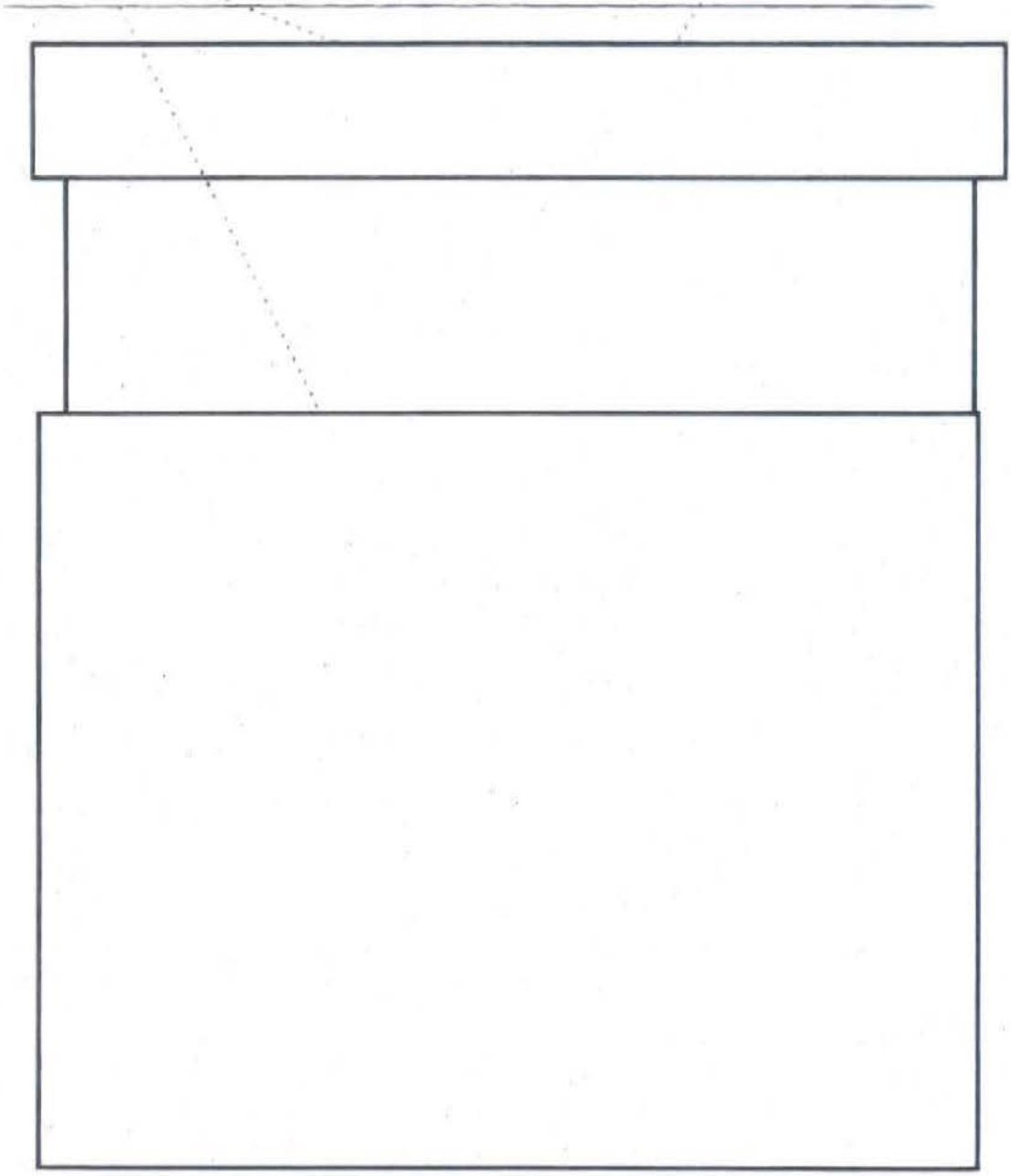
~~(U//FOUO)~~ [redacted] **not recommended.** The [redacted] report stated that although [redacted] may appear to be an attractive option, it is not recommended for three main reasons:

[redacted]

~~(U//FOUO)~~ [redacted] **is not flexible.** In addition, it is a complete system that is inflexible and forces users to interact, task and use it in a certain way. This means that would be extremely difficult for [redacted]

NSA (b)(3) 50 USC 3605

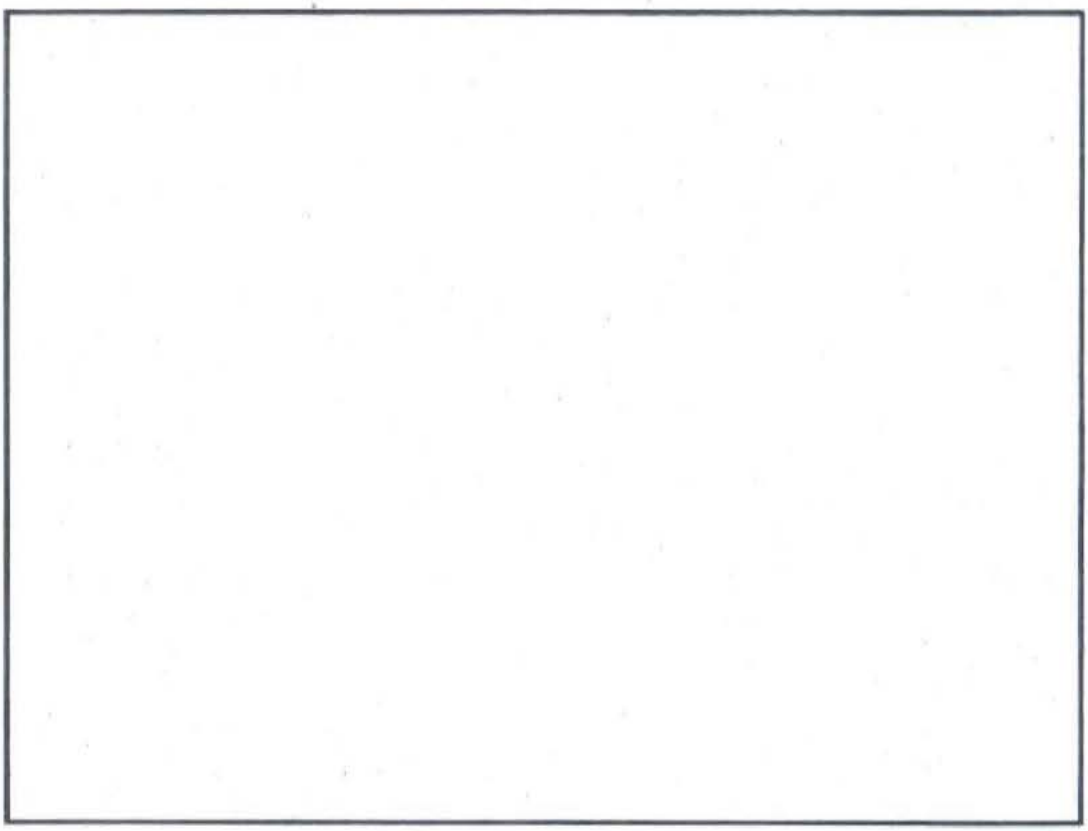
NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)



[5] (U) A complete system that solves all the processing problems itself. It has its own input, control, status, monitoring, user interfaces, and data formats. Even though other systems have exactly the same problems to solve, stove-piped systems will implement their own solutions to each.

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

(U) Preliminary deployment. If required, the following components are recommended for a preliminary deployment:



Appendix G. Deployment Studies (U)

(U) THINTHREAD: A Deployment Suitability Assessment

(S//SI) The purpose of the Deployment Suitability Report and the assessment it describes was to provide information, analysis, and recommendations for planning THINTHREAD deployments to [redacted] sites identified by Signal Intelligence Programs in the assessment charter. Once deployed, THINTHREAD would be an interim capability that would operate at designated sites for 1 to 2 years [redacted]

[redacted]

(U) Preliminary research on THINTHREAD was performed by the Test, Technology and Evaluation team in February 2002, but the formal evaluation was executed from March 1, 2002, through March 18, 2002.

(U) Summary of THINTHREAD Deployment Suitability

(U//~~FOUO~~) THINTHREAD was successfully deployed for developmental evaluation to a single pilot site with approximately a dozen analysts using the prototype. Since then, the Signals Intelligence Directorate identified THINTHREAD as an operational prototype that merits further assessment as an analytic tool that may improve analysts' ability to deliver quality Signals Intelligence to their respective customers. In preparing for the next step of deploying THINTHREAD to a diversity of [redacted] sites, the THINTHREAD Program team has made progress in identifying and executing the planning and coordinating activities that are necessary for future deployments. However, those activities had not been executed to the level needed for future, efficient and successful multiple deployments. Prior to deploying THINTHREAD any further, the Test, Technology and Evaluation Team advised that the following risk mitigation and preparation activities be addressed.

NSA (b)(3) 50 USC 3605 [redacted]

(U) General Recommendations.

(U//~~FOUO~~) The Deployment Suitability Assessment Study made the following recommendations:

- (U) minimize operational risk of deploying THINTHREAD to multiple [redacted] sites by providing training to site support personnel, implementing a THINTHREAD systemwide configuration management process, and developing a process by which site personnel can identify and resolve problems with the system as they arise;

NSA (b)(3) 50 USC 3605

- (U) generate user, system, technical, and programmatic documentation. Existing documentation is insufficient to sustain the prototype for the planned length of deployments;
- (U) accelerate deployment planning; it has been slow to occur. Develop necessary partnerships with recipient [redacted] sites and deployment support organizations; and
- (U//~~FOUO~~) acquire sufficient numbers of appropriately skilled personnel to develop documentation, perform deployment planning, support deployments to [redacted] sites, automate user support processes, and develop controlling and measuring activities for multiple deployments of THINTHREAD.

(U) For further details, listed below are the seven key findings and related discussions in the THINTHREAD Deployment Suitability Report.

(U) Finding 1 Discussion.

(U//~~FOUO~~) There were no technical issues that would prevent THINTHREAD from being deployed as an operational prototype.

[redacted]

- (U) Current THINTHREAD system development procedures were effective, and a cooperative development effort was proceeding smoothly with the pilot site.

[redacted]

(U) **Recommendations.** There were no recommendations.

(U) Finding 2 Discussion

(U//~~FOUO~~) The overall operational risk of making successful deployments was moderate, when viewed from an operational prototype perspective. The Finding 2 discussion areas were divided into two parts: 1) those items that would increase the operational risk of deploying THINTHREAD; and 2) those items that would not increase the operation risk of deploying THINTHREAD.

(U//~~FOUO~~) **Part 1.** The following would increase the operational risks associated with deploying THINTHREAD:

- (U) lack of site support documentation and training for site support personnel.
- (U) lack of a configuration management process for THINTHREAD.
- (U) absence of a method for site personnel to identify or resolve a problem with the system.

NSA (b)(3) 50 USC 3605 [redacted]

(U) **Recommendations.** See the recommendations for THINTHREAD Findings 3 through 7 to address these risks.

(U//~~FOUO~~) **Part 2.** Few analysts were depending on THINTHREAD. Additional deployments would not interfere with the benefits currently being enjoyed by the few analyst users. However, by adding users, certain issues would become more prominent. Those issues were:

- (U) lack of analyst training on Web-interface and equation development for THINTHREAD;
- (U) no method for THINTHREAD personnel to assess user feedback on the Web interface;
- (U) no way to better measure the value of THINTHREAD to analysts;

[redacted]

- (U) some THINTHREAD files could not be viewed to pursue corrective actions.

(U//~~FOUO~~) Recommendations. The issues previously mentioned would not prevent the deployment of THINTHREAD, however, it was recommended that investigation in to those areas be performed in order to improve the operational value of THINTHREAD.

(U) Finding 3 Discussion

(U) There was minimal user, system, technical, or programmatic documentation. The existing documentation was insufficient to support the planned deployments.

- (U) There was no user documentation on how to use the tool. That was inefficient and could lead to a significant increase in user error. Difficulties using the tool can also lead to an increase in support calls that drained project resources.
- (U) THINTHREAD did not have a clearly stated, documented set of mission goals or objectives. There was no program plan, making it difficult to communicate information about THINTHREAD at a programmatic level.
- (U) A detailed schedule including all activities related to the system and deliverables before, during, and after deployment was not available. A high-level schedule containing the chronology of deployment was developed, but a detailed schedule was essential for proper resource management, costing, and prediction.
- (U) No installation and maintenance documentation was completed for site support personnel, although the team was working with the pilot site to develop installation documentation. Lack of installation and maintenance documentation endangered the continuity of operations at the deployment sites.
- (U) There was no operational support documentation for site personnel. Lack of support documentation could adversely affect timely correction of problems and could lead to loss of collection, loss of processing, or loss of data and metadata.

(U) The effects of minimal documentation could be overcome if an integrated team accomplished the development and deployment of THINTHREAD.

(U//~~FOUO~~) However, the risk represented by insufficient documentation was greatly increased because THINTHREAD was expected to remain [redacted] at multiple sites for 1 to 2 years.

(U//~~FOUO~~) Recommendations. Develop necessary documentation. That would necessitate an increase in the personnel devoted to documenting the system, but is essential to the successful deployment and operation of THINTHREAD. The lack of this documentation presented a serious risk to the successful deployment of THINTHREAD.

(U) Finding 4 Discussion

(U//~~FOUO~~) Deployment planning was slow to occur, and necessary partnerships with recipient [redacted] sites and deployment support organizations were not developed.

- (U//~~FOUO~~) Historically, the THINTHREAD Program Team focused on the prototype demonstration at the pilot site. The program's scope did not include multiple deployment sites and support activities. Because the THINTHREAD team received requirements from the Signals Intelligence Directorate for THINTHREAD deployment planning and to multiple and [redacted] locations, the THINTHREAD Program's scope reflected those new, additional requirements. [redacted] The THINTHREAD Program Team began addressing the numbers and types of skills needed to plan and carry out deployment and support activities by producing a Staffing Support Plan.

NSA (b)(3) 50 USC 3605

- (U//~~FOUO~~) The THINTHREAD Program Team did not have a comprehensive planning process. The lack of planning activities with [redacted] sites and deployment support organizations, including coordination and planning for partnerships and agreements, may have delayed deployment efforts and increased deployment costs.

[redacted] THINTHREAD was an interim capability and was scoped as a standalone, self-contained, and scalable system.

- (U//~~FOUO~~) Work roles essential to system deployment and operation were not identified for multiple site deployment scenarios. The relationships between work roles throughout the system's life cycle were not defined. The authorities for each work role had not been identified. The organizational structure set forth by the THINTHREAD Program Team focused on system development, and did not address system

(U//~~FOUO~~) deployment or operation in a [redacted] environment. The THINTHREAD Program Team was defining the additional work roles necessary for deployment activities.

- (U//~~FOUO~~) No formally recognized prioritization procedures existed to address the variety of requirements that would come to the program office from the numerous [redacted] sites when THINTHREAD is deployed.
- (U) THINTHREAD did not identify all the organizations requiring coordination through the various stages of deployment.

(U//~~FOUO~~) Recommendations. The findings presented a serious risk to successful deployment of THINTHREAD. To mitigate those risks, the following recommendations were suggested.

- (U) Develop deployment plans in partnership with specified recipient sites.
- (U) Coordinate and plan deployment activities with deployment support organizations.
- (U) Develop and establish organizational processes that could support multiple deployment activities, such as a requirements management process to assist in prioritizing program activities.
- (U) Continue addressing the work roles needed to plan and carry out deployment and support activities by producing a Staffing Support Plan.

NSA (b)(3) 50 USC 3605 [redacted]

(U) Finding 5 Discussion

(U//~~FOUO~~) The customer service and user support processes for THINTHREAD were manually intensive and directly involved the technical staff.

- (U//~~FOUO~~) The quality of service and support received by analysts using THINTHREAD was inconsistent. Some of the analysts interviewed by Test, Technology and Evaluation Team viewed the THINTHREAD Program Team to be unresponsive in general customer support, while other analysts experienced good responsiveness to their requests for additions or modifications [redacted]
- (U//~~FOUO~~) There was no formal trouble ticket mechanism in place. If a user or operator had a problem with THINTHREAD, he contacted someone on the THINTHREAD Program Team. This contact depends on personal acquaintance, because no list of THINTHREAD personnel was readily available, and there was no mechanism to locate the proper THINTHREAD contact. Similarly, the status of the response to a request could only be learned by personal contact.
- (U//~~FOUO~~) There was no formal mechanism for managing externally generated requirements, to include submitting a new requirement to THINTHREAD or for following the progress of the work.

- (U//~~FOUO~~) A single person on the THINTHREAD team was in charge of maintaining the [redacted] With just a few users, that person was able to enter or change [redacted] according to user requests received on the telephone or by e-mail. However, as more users are added, one person may have difficulty meeting the increased demand. The lack of personnel may become a problem as THINTHREAD was scaled to handle an increased user load and [redacted]

[redacted]

- (U//~~FOUO~~) A list of Web interface functionalities proposed by analysts was not incorporated into THINTHREAD.

(U//~~FOUO~~) Recommendations. The findings that led to the recommendations would not have prevented the successful deployment of THINTHREAD to [redacted] The recommendations were made to improve the operational efficiency of THINTHREAD after it was deployed at [redacted] sites.

- (U) Institute an automated, formal THINTHREAD customer service and user support process.

[redacted]

- (U//~~FOUO~~) Acquire and use a trouble ticketing tool, which can manage externally generated requirements as well as system problems. This tool should interact with the SID requirements process. The THINTHREAD Program Team should address high-priority requirements that fit within the program scope.
- (U) Develop a process to address Web interface functional enhancements requested by analysts.
- (U//~~FOUO~~) Address the lack of personnel depth in the THINTHREAD Program Team for maintaining [redacted] as THINTHREAD is scaled to handle more users and multiple site deployments.

(U) Finding 6 Discussion

(U//~~FOUO~~) There was no process for controlling and measuring operational, programmatic, and technical performance effectiveness of THINTHREAD, once deployed.

- (U//~~FOUO~~) THINTHREAD did not have a clearly stated set of system specifications or a method to validate the THINTHREAD concept or performance results. Thus, there was no way to determine if the system

~~(S//REL TO USA, FVEY)~~ was successful or if it failed, which may lead to confusion in stakeholders' understanding of the success of THINTHREAD.

- (U//~~FOUO~~) THINTHREAD had mechanisms for assessing progress and status within the system development phase. However, there were no systematic, consistent mechanisms for overall program measurement, which included identifying test criteria, establishing program schedules, and documenting a system baseline to address progress. No feedback mechanisms had been identified such as risk management or contingency planning.
- (U//~~FOUO~~) Aside from schedule control, there were no tools to measure progress towards program objectives because there were no formalized program objectives.
- (U//~~FOUO~~) THINTHREAD did not have Standards of Performance established for personnel developing THINTHREAD. If future THINTHREAD development crosses organizational groups, a common set of Standards of Performance for personnel may become necessary.
- (U//~~FOUO~~) There was no configuration management process, which could pose a risk when reporting system problems and correcting them at a site. In addition, the lack of a configuration management process could cause difficulty when upgrading or deploying versions, and also make rollback extremely risky.
- (U//~~FOUO~~) The fault or warning detection was automated but the necessary reactions and responses were not. [redacted] software provided a simple way to check status of various system parameters through a Web interface. However, when an operator recognizes a problem, he must actively initiate corrective measures. Sometimes that action is a simple matter, such as restarting a process. At other times, physical hardware must be changed. No corrective action could be executed if an operator was not present to initiate a corrective action.
- [redacted]

NSA (b)(3) 50 USC 3605

- (U//~~FOUO~~) THINTHREAD had no established process for managing requirements.

(U//~~FOUO~~) Recommendations. The findings that led to the recommendations would not have prevented the successful deployment of THINTHREAD to [redacted] sites. The recommendations were made to improve the operational efficiency of THINTHREAD after it was deployed [redacted] sites. The following is a list of recommendations.

- (U//~~FOUO~~) Develop processes and acquire automated tools based on clearly stated specifications for controlling and measuring the programmatic, operational, and technical performance of THINTHREAD deployment [redacted] sites.

NSA (b)(3) 50 USC 3605

- (U//~~FOUO~~) Acquire a commercially available configuration control system to enable versioning, rollback, and configuration management. The system should interface with the trouble ticketing system and the requirements management system to provide full traceability.
- (U//~~FOUO~~) Develop Standards of Performance (if future THINTHREAD development crosses organizational groups).
- (U//~~FOUO~~) Automate reactions and responses to the existing fault and warning detection system to improve successful deployment.

[redacted]

- (U//~~FOUO~~) Establish a requirements management process for THINTHREAD that is linked to the SID requirements management process.

(U) Finding 7 Discussion

(U//~~FOUO~~) The number and skill mix of THINTHREAD personnel was inadequate to support the proposed number of deployments; however, personnel resources for supporting future multiple deployments were being identified. There were shortfalls with the numbers and skills of personnel required for planning and executing installations at candidate sites. Also, there was a lack of documentation, providing the necessary maintenance and help desk support, configuration management, and planning and scheduling. Collectively, those shortcomings created a serious risk to successful completion of multiple deployments.

(U//~~FOUO~~) Recommendations. The finding presented serious risk to successful deployment of THINTHREAD. It was recommended to continue to identify and acquire the number and types of skilled personnel resources required for documentation, deployment planning, actual deployment to [redacted] sites, and an automation of user support processes and controls that measures THINTHREAD activities to reduce that risk.

NSA (b)(3) 50 USC 3605

Appendix H. [redacted] and THINTHREAD – a Complementary Approach (U//~~FOUO~~)

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

(U) This appendix presents excerpts from the [redacted] and THINTHREAD white paper.

(U) Introduction

(~~C//SI~~) The purpose of the [redacted] and THINTHREAD white paper was to suggest a complementary solution using [redacted] and THINTHREAD [redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

[redacted]

(U) Needs Analysis Revisited

[redacted]

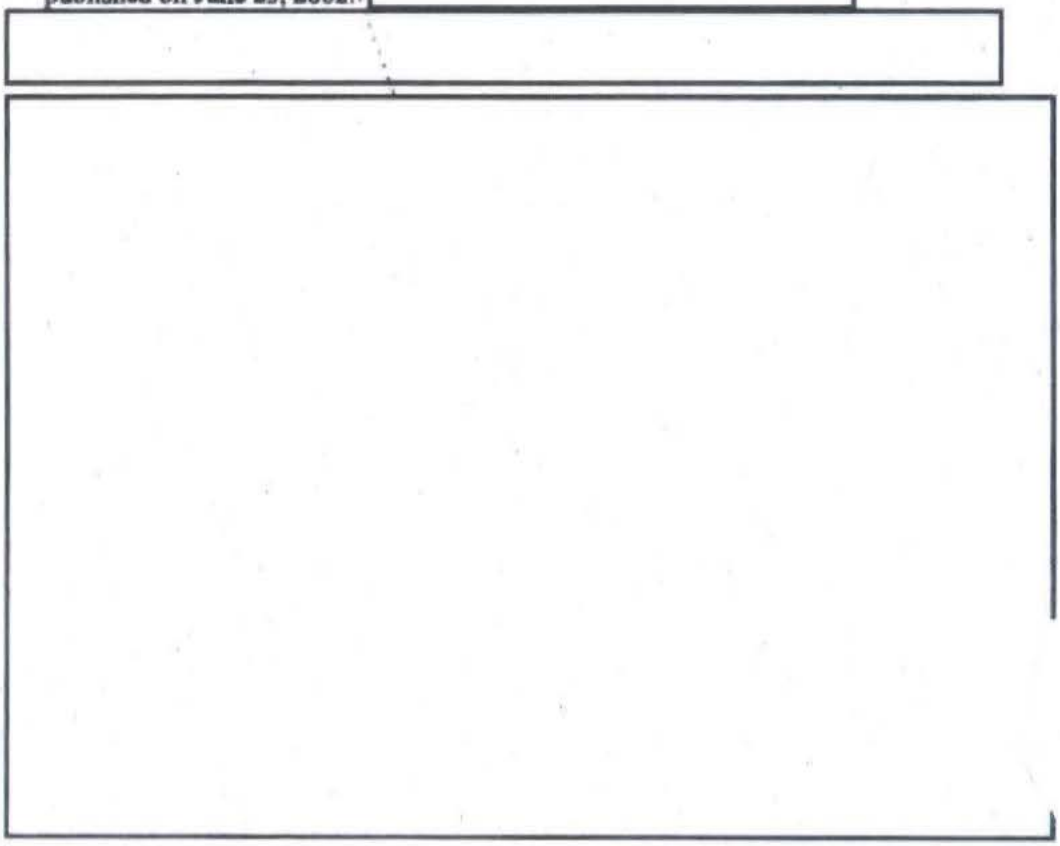
NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

NSA (b)(3) 50 USC 3605

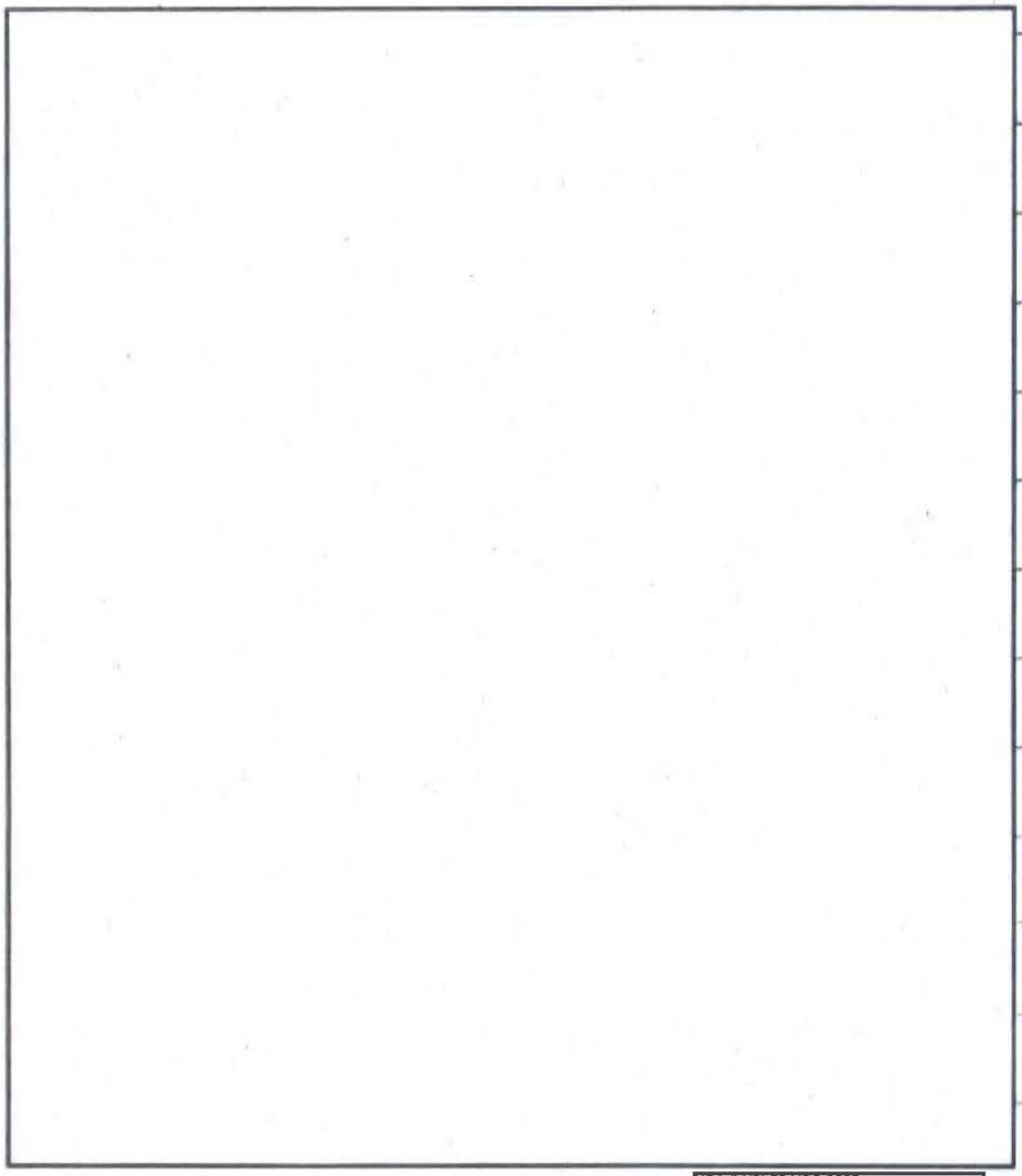


(U) System Capabilities Overviews

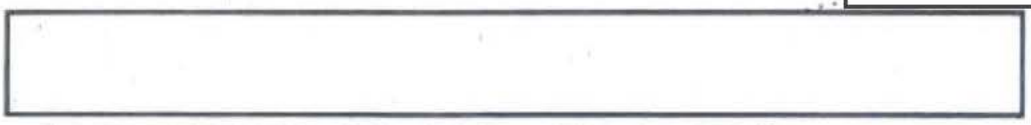
(U//~~FOUO~~) The following section outlines the strengths of each system in its current, as-advertised, single instance configuration at the time the paper was published on June 25, 2002.



NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)



NSA (b)(3) 50 USC 3605



[3] (U) THINTHREAD Briefing; 23 May 2002, Microsoft PowerPoint, Slide 28.

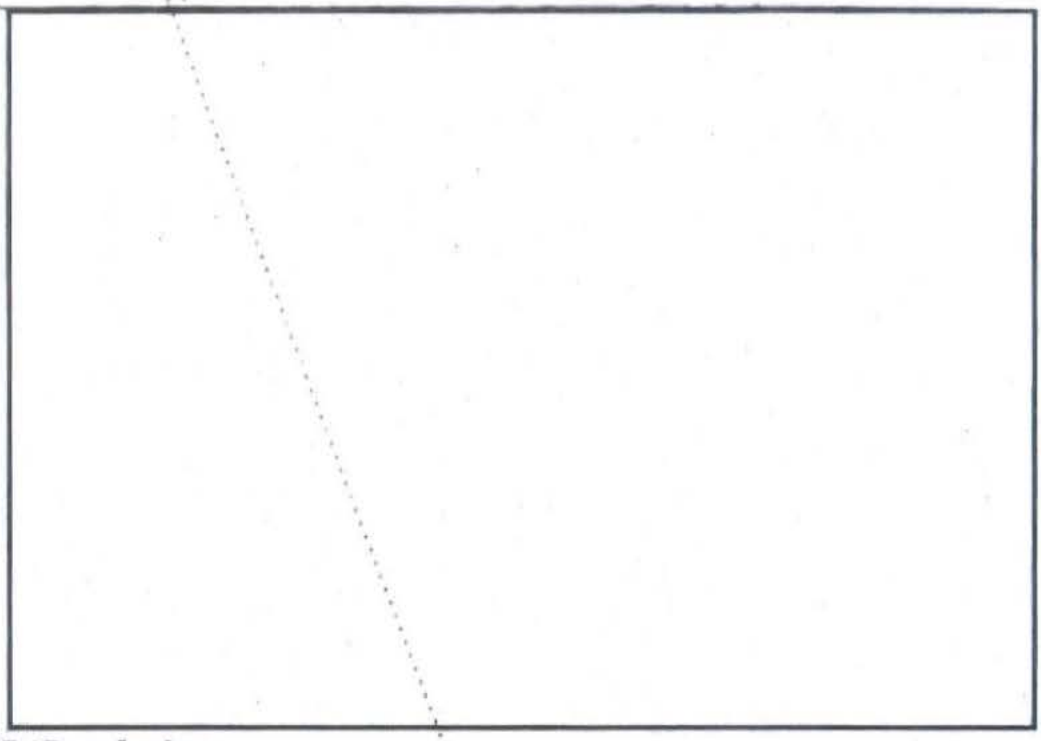
NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

(U) Optimal System

(U) Cost Analysis

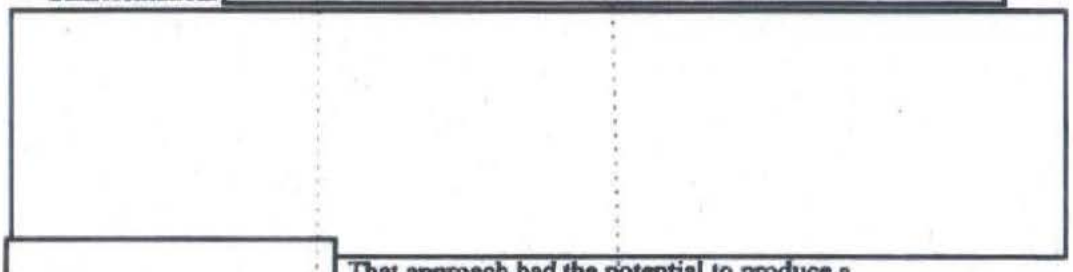
(U) The following hypothetical scenarios illustrated how a combination of both systems may produce a more effective result in terms of both complexity and cost. A few assumptions apply:

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)



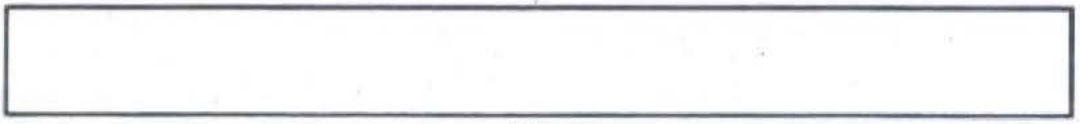
(U) Conclusion

(~~C//SI~~) The [redacted] and THINTHREAD systems each possessed unique strengths that could be applied to digital network exploitation transformation. [redacted]



[redacted] That approach had the potential to produce a significantly more cost-efficient collection system.

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605



NSA (b)(3) 50 USC 3605

[redacted]

Appendix I. Glossary (U)

(U)

[redacted]

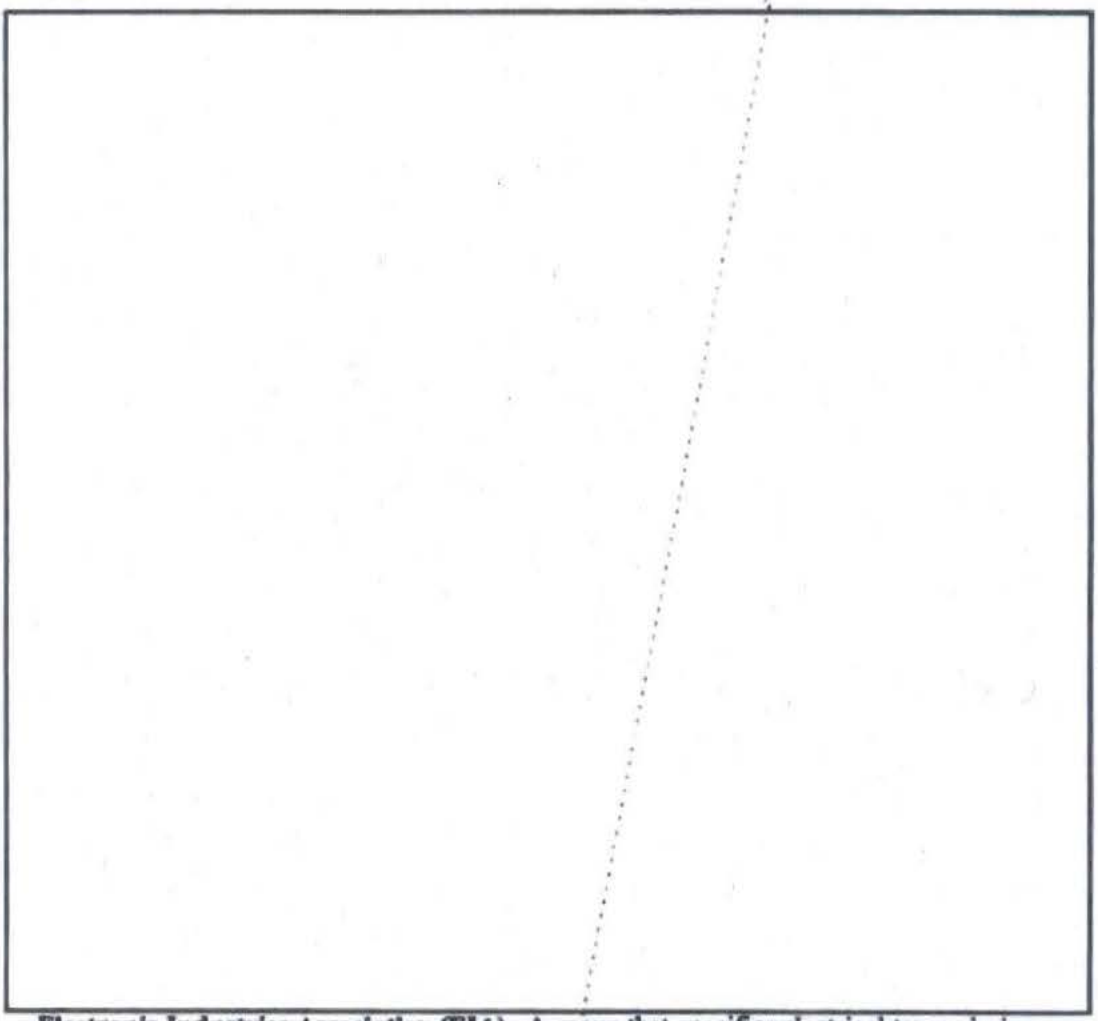
Consultative Committee for International Telegraph and Telephone (CCITT). Consultative Committee for International Telegraph and Telephone is the International organization responsible for the development of communications standards. Now called the International Telecommunication Union Telecommunication Standardization Sector.

[redacted]

(U)

NSA (b)(3) 50 USC 3605

(U)



Electronic Industries Association (EIA). A group that specifies electrical transmission standards. The Electronic Industries Association and Telecommunications Industry Association have developed numerous well-known communications standards, including Electronic Industries Association and Telecommunications Industry Association -232 and Electronic Industries Association and Telecommunications Industry Association -449.

(U)

NSA (b)(3) 50 USC 3605

(U)



International Telecommunication Union Telecommunication Standardization Sector (ITU-T). International body that develops worldwide standards for telecommunications technologies. The International Telecommunication Union Telecommunication Standardization Sector carries out the functions of the former Consultative Committee for International Telegraph and Telephone.

International Organization for Standardization (ISO). International organization that is responsible for a wide range of standards, including those relevant to networking. The International Organization for Standardization developed the Open System Interconnection reference model, a popular networking reference model.

(U)

NSA (b)(3) 50 USC 3605

(U)

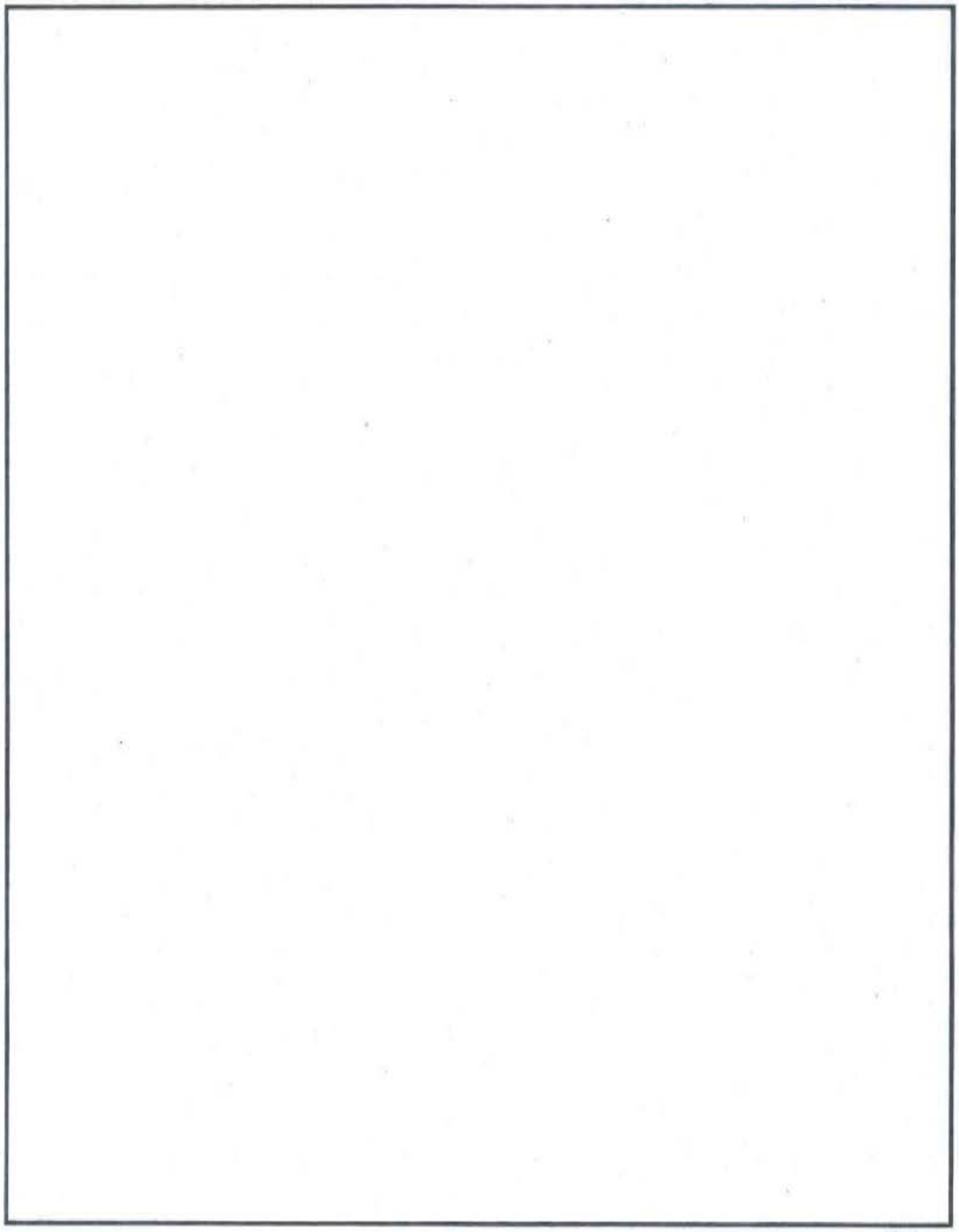
Institute of Electrical and Electronics Engineers (IEEE) 802.3. Institute of Electrical and Electronics Engineers LAN protocol that specifies an implementation of the physical layer and the MAC sublayer of the data link layer. Institute of Electrical and Electronics Engineers 802.3 uses Carrier Sense Multiple Access Collision Detect access at a variety of speeds over a variety of physical media. Extensions to the I Institute of Electrical and Electronics Engineers 802.3 standard specify implementations for Fast Ethernet.

Open System Interconnection (OSI). International standardization program created by International Organization for Standardization and International Telecommunication Union Telecommunication Standardization Sector to develop standards for data networking that facilitate multi-vendor equipment interoperability.

(U)

NSA (b)(3) 50 USC 3605

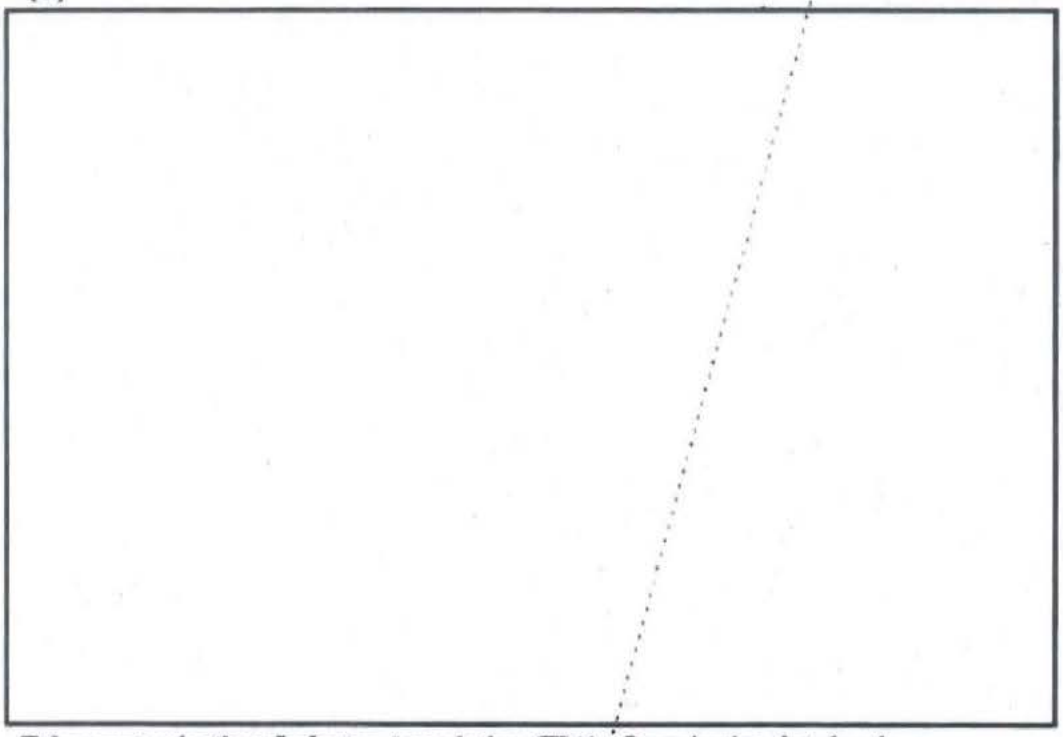
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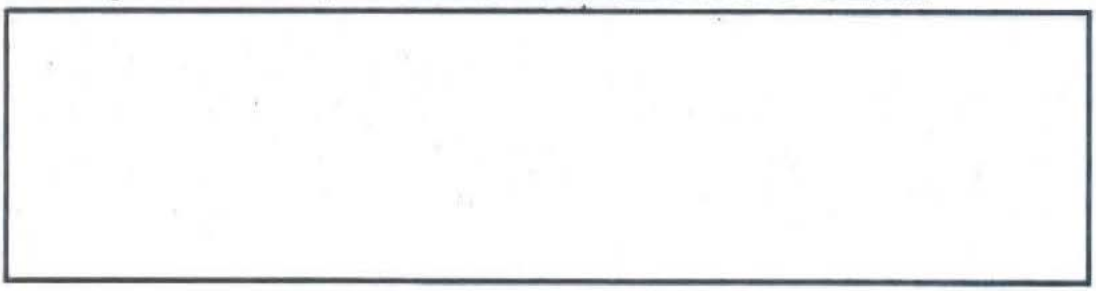
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NSA (b)(3) 50 USC 3605

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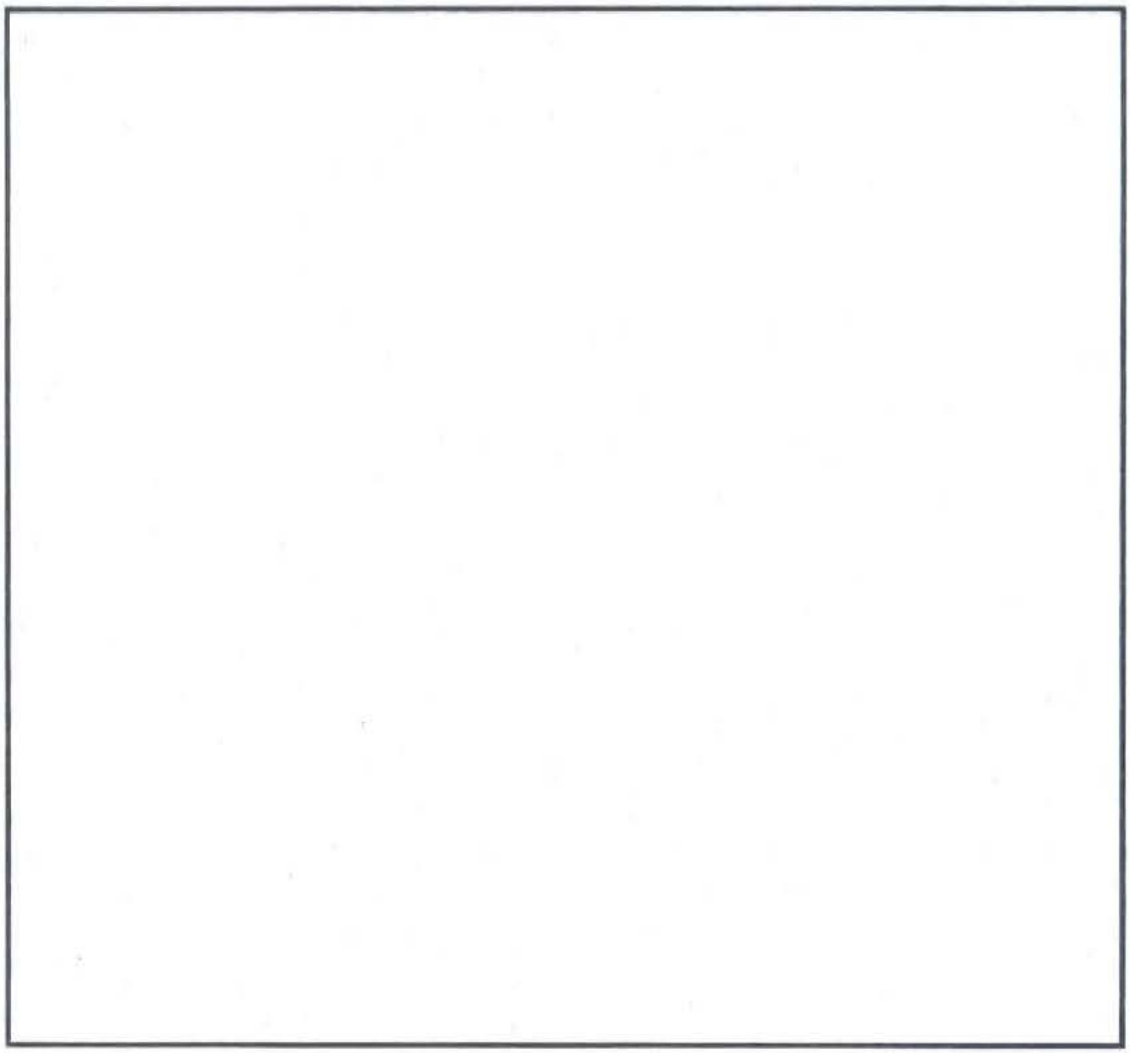
Telecommunications Industry Association (TIA). Organization that develops standards relating to telecommunications technologies. Together, the Telecommunications Industry Association and the Electronic Industries Association have formalized standards, such as Electronic Industries Association and Telecommunications Industry Association -232, for the electrical characteristics of data transmission.



(U)

NSA (b)(3) 50 USC 3605

(U)



(U)

Appendix J. Response to Management Comments (U)

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

~~(S//SI)~~ **Management Comments.** A significant point of departure among Office of Inspector General Report assertions and NSA understanding, reflected within NSA's responses below, concerns the validity of using THINTHREAD as the Agency's Digital Network Exploitation system. NSA understands that THINTHREAD does not contain the functionality or capability maturity to be the Intelligence Community's digital network exploitation system – and it does not need to be. [redacted] is the Community's digital network exploitation system: it contains the depth and breadth of capabilities to exploit all known digital network exploitation targets (see Annex A), it uses state-of-the-art technologies (both in hardware and software), and it supports itself with [redacted] program management and systems engineering. THINTHREAD's best-of-breed capabilities are integrated into [redacted] valuing THINTHREAD's contribution to digital network exploitation and capitalizing on [redacted] s programmatic and systems engineering maturity. Any assertion that THINTHREAD might be used to "replace" [redacted] exposes a significant misunderstanding of the situation.

~~(S//SI)~~ **Audit Response.** Two recent Joint Inspection Team evaluations of NSA sites and mission support equipment stated that, [redacted] does not have the technical capability to [redacted] to fully meet NSA mission requirements. THINTHREAD has been able to successfully [redacted] since November 2000. Also, THINTHREAD can be scaled to meet foreseeable data requirements. THINTHREAD originally concentrated on [redacted] and could have been enhanced to [redacted] provides for a fraction of the amount spent on [redacted] THINTHREAD Technical Review," stated that THINTHREAD developers were let go and no further progress was made toward developing THINTHREAD. As a result, TRAILBLAZER learning opportunities were shut down and alternative THINTHREAD approaches to the digital network exploitation mission were terminated.

~~(C)~~ **Management Comments.** Although NSA will agree to conduct an independent assessment of TRAILBLAZER and THINTHREAD, we believe that it will validate all of the assertions made in our responses to the Office of Inspector General recommendations. Furthermore, we do not agree with the original Hot Line complaint that fraud, waste, and abuse occurred during the THINTHREAD/[redacted] TRAILBLAZER decision process, which was conducted in an open fashion to provide the best benefit for Agency mission and customers. More importantly, there has been no evidence documented during this Office of Inspector General investigation that supports that complaint.

~~(S//SI)~~ **Audit Response.** The report documents that NSA spent approximately [redacted] to develop the TRAILBLAZER Initial Transformation Activities even though internal and external reports recommended using THINTHREAD and THINTHEAD Technologies as the interim solution for digital network exploitation. The report also

[redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

(S) Management Comments. The world's most advanced cryptologic experts, who are resident at NSA, have assessed THINTHREAD and [redacted] and are confident in the approach taken. With mission experience and training unique to NSA, these experts are best suited to make an assessment of the nation's cryptologic needs.

(S//SI) Audit Response. The report accurately documents our assessment of all of the information received during this audit including interviews and information received from NSA cryptologic experts and current and former NSA employees, who are experts on THINTHREAD and [redacted] Based on studies and evaluations that NSA performed, we believe that NSA management is aware that [redacted] does not meet the mission requirement [redacted] and that THINTHREAD could be more cost-effective solution than solutions currently being pursued. However, NSA management has refused to consider that THINTHREAD is a viable solution to the Intelligence Community's digital network exploitation requirements. It is our opinion that THINTHREAD could be more cost-effective solution than solutions currently being pursued. An external and independent study should be conducted to compare THINTHREAD and [redacted] to validate the capabilities of both systems.

(S) Management Comments. THINTHREAD capabilities are already deployed within NSA's processing, exploitation, analysis and production programs, as a result of previous Congressional direction, sound systems engineering practices, and common sense. It would be detrimental to NSA's mission to remove non-THINTHREAD capabilities from the current digital network exploitation architecture.

(S//SI) Audit Response. THINTHREAD capabilities are not being fully used within the existing NSA [redacted] ystem. THINTHREAD is the only developed system that is capable o [redacted] We recommended using a complementary approach using [redacted] with THINTHREAD until THINTHREAD is enhanced to [redacted]

(S//SI) Management Comments. The "[redacted] and THINTHREAD Technical Review," written by [redacted] in February 2001, recommended adopting THINTHREAD's [redacted] and THINTHREAD's [redacted] NSA agreed and leveraged TRAILBLAZER activity to integrate [redacted]

(S//SI) Audit Response. The "[redacted] and THINTHREAD Technical Review," only reviewed the areas of performance, resources, maintainability, scalability, and the ability to meet mission requirements. The study recommended adopting [redacted] and [redacted] however, the adoption was not necessary to deploy THINTHREAD. In addition, the review stated that Digital Network Exploitation operational mission could be completed entirely with THINTHREAD if the [redacted] was [redacted]. The review also stated that THINTHREAD could not be integrated into the [redacted] system because the fundamental approach and technical design were not compatible. The "NSA Modernization Follow-Up Study" stated that the NSA attempt to merge THINTHREAD technology into the architecture based on the [redacted] service was not successful and was not technically feasible because when [redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

~~(S//SI)~~ THINTHREAD capabilities are degraded severely. THINTHREAD may not currently have the ability to handle all , but an upgrade quickly and cheaply would be possible with the additional requested programmers.

~~(S//SI)~~ **Management Comments.** In FY 2002, Congress directed NSA to deploy THINTHREAD to sites. NSA complied with this directive (see Annex B – FY2002 THINTHREAD Deployments).

~~(S//SI)~~ **Audit Response.** NSA delayed the deployment of THINTHREAD. The FY 2001 Intelligence Authorization Bill (CMS 1-25-2001), December 17, 2001, by the House Permanent Select Committee on Intelligence stated the conferees directed that be contracted immediately for THINTHREAD deployments at sites selected The conferees strongly recommended the deployment of THINTHREAD capabilities at

~~(S//SI)~~ NSA briefed the House Permanent Select Committee on Intelligence that it would deploy THINTHREAD to sites, but the THINTHREAD Project Management Office modified this to sites. Despite congressional direction to immediately deploy THINTHREAD, as of March 2004, NSA had deployed THINTHREAD to only sites, with site deployments occurring since November 2003. In March 2002, the THINTHREAD deployment process was transferred to the management office and the Program Manager also became the Program Manager responsible for the operational deployment of THINTHREAD. Although NSA had a contract available to immediately deploy THINTHREAD as directed by Congress, NSA spread the deployment over a 2 year-period. We also determined that tasked to THINTHREAD were suspect. THINTHREAD was not deployed to the as directed by Congress. THINTHREAD was only deployed to sites.

~~(S//SI)~~ NSA did not plan to adequately test or maximize the performance of THINTHREAD and did not encourage analysts to use THINTHREAD. In addition, NSA provided inaccurate information to the audit team when it stated that no analysts or personnel were at collection sites to provide information about the operational and collection capabilities of and THINTHREAD. We determined that NSA provided an incomplete THINTHREAD system study, but we were unable to confirm which version of THINTHREAD software was provided. In addition, the NSA Chief of Signals Intelligence stated that NSA did not provide any technical assistance in the deployment

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

~~(S//SI)~~ of THINTHREAD for the [redacted] study. The [redacted] study concluded that [redacted] was stove-piped and did not recommend it as a solution for its digital exploitation system.

~~(S//SI)~~ **Management Comments.** In November 2002, NSA briefed Congressional staffs on the NSA plan for THINTHREAD and [redacted]. The staffs concurred with NSA's proposals. This concurrence was substantiated in the FY 2003 House bill containing an increase of [redacted] for signals intelligence processing, and in the FY 2004 authorization for an additional [redacted] to develop and support a long-term signals processing strategy across the signal intelligence enterprise.

(U//~~FOUO~~) Audit Response. NSA was unable to provide documentation of these briefs to the audit team, documentation of subsequent guidance or direction from congress, or any other information that documents congressional dissatisfaction with THINTHREAD.

~~(S//SI)~~ **Management Comments.** In FY2003 and FY2004, during budget authorization and appropriations briefings to the House Permanent Select Committee on Intelligence and the Senate Select Committee on Intelligence, the Congressional staffs recommended consolidating all processing activities into a single, cohesive, horizontally integrated, evolutionary-development processing digital network exploitation program. NSA responded by elevating [redacted] as the overarching digital network exploitation program, consolidating processing activities within one organization, consolidating systems engineering and systems engineering management and control, and strengthening acquisition management capabilities.

~~(S//SI)~~ **Audit Response.** [redacted] is an umbrella term for all digital network exploitation programs, including legacy systems and new development. However, [redacted] was not able to process the digital network exploitation requirements.

~~(S//SI)~~ **Management Comments.** [redacted]

~~(S//SI)~~ **Audit Response.** We agree that some THINTHREAD lessons learned were applied to [redacted] but there is no evidence to support that the THINTHREAD project continued to develop and support [redacted] for the [redacted] Program. The THINTHREAD development concept and approach directly contradict the current NSA digital network exploitation approach and is not embodied in [redacted] Internal and external studies show that attempts

[redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

~~(S//SI)~~ to merge THINTHREAD technology into the architecture based on the service were not successful or technically feasible because the merger had a negative effect on THINTHREAD performance.

~~(S//SI)~~ Management Comments. system engineering management continues to improve existing capabilities, develop new capabilities, and plan for anticipated requirements. Additionally, . A cursory comparison between the two systems reveals the depth and breadth of activity and implies the impact of Office of Inspector General Recommendation A.1 is devastating to Intelligence Community analyst needs.

~~(S)~~ Audit Response. NSA management continues to enhance capabilities, even though its systems are based on other legacy systems and legacy approaches that have not kept up with today's technology. All capabilities shown in Annex A can be added to the existing THINTHREAD architecture.

(U//~~FOUO~~) Management Comments. NSA recommended that the audit report emphasis NSA's cooperation and responsiveness to Congress.

~~(S//SI)~~ Audit Response. Information in congressional records notes that NSA did not explain to congress why THINTHREAD did not constitute at least some part of TRAILBLAZER. Instead, NSA delayed deploying THINTHREAD. Although the THINTHREAD deployment study showed that not being fully documented would not have a negative effect on mission capability, NSA chose to document THINTHREAD before completing its deployment. Most of THINTHREAD deployments could have been completed prior to our audit. The THINTHREAD deployment plan was inadequate,

(U//~~FOUO~~) Management Comments. NSA recommended that the audit report emphasis that the THINTHREAD capability is valued by NSA.

~~(S)~~ Audit Response. NSA management did not support the development and use of THINTHREAD despite the opinion of many NSA cryptologic experts and engineers that THINTREAD technologies and capability were viable tools for deployment for digital network exploitation.

(~~S~~) Management Comments. NSA recommended that the audit report emphasis that THINTHREAD capability is integrated within the NSA processing services.

(~~S~~) Audit Response. We agree that some lessons learned have been integrated within the NSA processing services; however, NSA does not adequately use THINTHREAD and its capabilities.

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

(C) Management Comments. THINTHREAD does not possess the breadth and depth of services required by the Intelligence Community because its overarching program, [redacted] does. Subordinating [redacted] to THINTHREAD would be detrimental to Intelligence Community requirements.

(S//SI) Audit Response. If NSA added the services to THINTHREAD required by the Intelligence Community, THINTHREAD would have the breadth and depth of services required by intelligence agencies and could exploit today's [redacted] in the foreseeable future.

(S//SI) NSA continues to spend millions of dollars enhancing legacy system based on legacy approaches instead of using the THINTHREAD interim capability that can be used immediately. NSA management should consider THINTHREAD as an option for the future development of the baseline digital network exploitation system. It is widely known at NSA and the digital network exploitation community that [redacted]

(S//SI) Management Comments. NSA strategy for collection site processing is based on using the best available technology which allows for rapid assimilation of evolving technologies, is dedicated to world-class systems engineering, and is committed to the NSA corporate vision. Migrating from [redacted] to THINTHREAD would violate this strategy.

(S//SI) Audit Response. The most recent evaluations of [redacted] by an NSA Joint Inspection Team state that [redacted] cannot [redacted] and that planned enhancements will not provide the technical capabilities to keep up with technical advancements. The evaluations also state that the [redacted] is flawed; therefore, we believe that this condition shows that NSA is not using the best available technology or world-class systems engineering. [redacted] In addition, NSA comments do not illustrate how migrating to THINTHREAD would violate NSA strategy.

(C) Management Comments. NSA accepted the [redacted] and [redacted] studies, the Technology Test and Evaluation,[12] and the [redacted] report, committing to corporate strategy (TRAILBLAZER), advancing program and acquisition management, advancing systems engineering and systems engineering management, incorporating the best of existing processing systems – including THINTHREAD – and dedicating itself to continual improvement. NSA's [redacted] program embodies that commitment. It is based on state-of-the-art technology, which maximally uses commodity-based hardware and industry standard engineering and development

[redacted]

(S) methodologies, to allow rapid assimilation of new technologies and rapid adoption of service changes while at the same time preserving a stable processing environment.

~~(C//SI)~~ **Audit Response.** NSA did not implement the recommendations in the study that recommended adopting the and including the operating system from the system. Those reports also recommended that THINTHREAD be deployed immediately because it could provide the needed exploitation services. The team was instructed to find a way to incorporate the into the system rather than incorporate the Zone 3 Operating System into the When several members of the team stated that technical and philosophical differences would not allow the two systems to merge, NSA officials insisted that they try.

~~(S//SI)~~ **Management Comments.** NSA stated that the draft report omitted critical information about new developments and improvements of THINTHREAD services within R. NSA also stated that any attempt to migrate services to THINTHREAD would require a comprehensive re-engineering of the THINTHREAD framework to take advantage of updates to signals intelligence technology and to make it useable within the existing signals intelligence system. The cost to migrate current and evolving capabilities while maintaining mission has yet to be quantified.

~~(S//SI)~~ **Audit Response.** We agree that some lessons learned from THINTHREAD have been applied to systems, but NSA did not document and the audit team did not see evidence of continuing development of THINTHREAD. In Appendix D, the report shows that all of the services being performed by can be added to the THINTHREAD system and that the estimated cost for THINTHREAD is a fraction of the development cost for In addition, those costs do not include the substantial savings NSA would gain from eliminating the operation and maintenance cost for Also, THINTHREAD has its own databases, provides its own graphics interface for analysts, and does not use the NSA traditional approach.

~~(S//SI)~~ **Management Comments.** NSA stated that the draft report did not indicate the risks or the effects that performing any level of change would have on the existing capability of the mission. NSA also stated that limitations of many collection sites prohibit additional systems, would exacerbate problems with parallel support and migration, and would put the mission at risk. The total risk of migrating capabilities while maintaining mission support has not yet been quantified.

~~(S//SI)~~ **Audit Response.** The DoD IG recommendations that NSA deploy THINTHREAD as an interim solution and use a complementary approach, until THINTHREAD is fully enhanced, took into account the risks and effect that might have on the existing capabilities. Of course, NSA must identify the risks and effects that changing existing capability might have on the mission. Collection sites limitations was one of the issues considered by the original THINTHREAD developers. NSA cannot

NSA management does not recognize that

~~(S//SI)~~ spending millions of dollars to add new capabilities to systems that are already operating far below current mission requirements and based on outdated approaches will not fix the problems of the NSA digital network exploitation.

~~(C)~~ **Management Comments.** NSA stated that the audit report does not define the meaning of "fully enhanced and extended THINTHREAD." NSA believes that a "fully enhanced and extended THINTHREAD" engineered in concert with the NSA corporate strategy will be remarkably similar to, or the same as, [redacted] Alternatively, if this "fully enhanced and extended THINTHREAD" were not engineered according to the NSA corporate strategy, potentially significant changes to the strategy would cause changes to subsystems throughout the signal intelligence system and would interrupt analysts performing their national security duties. NSA also stated that the report did not indicate how THINTHREAD would be engineered into the signal intelligence system or its effects on the system. The NSA and the Department of Defense Office of the Inspector General did not quantify the total scope and impact of migrating current capabilities while maintaining mission capabilities.

(S) NSA management believes that THINTHREAD does not have the potential to be the sole digital network exploitation processing system. THINTHREAD provides the greatest value to the signal intelligence system and to the analysts by remaining integrated within [redacted] Further, NSA believes that the scope, cost and risk of migrating from [redacted] to THINTHREAD are not characterized well enough to supplant existing, corporate signal intelligence strategy.

(S) **Audit Response.** The term "fully enhanced and extended THINTHREAD" was used in the NSA Modernization Study and we believe that it means that NSA will enhance and extend THINTHREAD to provide the capabilities needed to meet mission requirements. The final system would be "remarkably" similar to [redacted]; however, the new THINTHREAD would be able to fulfill the future, as well as the existing, input and throughput requirements. [redacted] study and the Joint Inspectors General Inspection Reports state that the technology design of [redacted] is flawed and it cannot keep pace with advances in technology without major changes.

~~(C)~~ **Management Comments.** The cost to produce "fully enhanced and extended" THINTHREAD, particularly in terms of level-of-effort and skill availability, is not known but is certainly not trivial.

~~(S)~~ **Audit Response.** A small team of NSA engineers developed THINTHREAD in less than 1 year. The team used readily available commercial-off-the-shelf software for 80 percent of the system and the remaining 20 percent was developed. Our review of an NSA employee and contractor database showed that several members of the original THINTHREAD team, still work in some capacity at the NSA and are available to start the enhancement of THINTHREAD.

~~(C)~~ **Management Comments.** The cost of modifying the rest of the signal intelligence system, as well as impact on other parties' systems, to conform to THINTHREAD operations is not known but is certainly not trivial.

~~(S)~~ **Audit Response.** To continue and win the United States' fight against terrorism, it is imperative that NSA deploys the best technology to meet mission requirements

~~(TS//SI)~~ immediately. NSA must determine and then implement the right solution with proven capability. The failure to implement the right solution could result in loss of intelligence, which could lead to the loss of American lives like that of September 11, 2001.

~~(C)~~ **Management Comments.** The cost to support multiple platforms with a migration without affecting the mission to THINTHREAD is not known, but is certainly not trivial.

~~(S//SI)~~ **Audit Response.** After THINTHREAD is fully enhanced and extended, NSA should determine which [redacted] systems may be eliminated. Some systems and development may be eliminated now, based on the appropriate analysis and review. Eliminating unnecessary systems would result in a substantial reduction in operations and maintenance cost for NSA digital network exploitation systems.

~~(TS)~~ **Management Comments.** The achievability, cost and effect of retraining the Intelligence Community's analysts to use THINTHREAD while the maintaining mission is not known, but is certainly not trivial.

~~(TS)~~ **Audit Response.** Several NSA intelligence analysts learned to use THINTHREAD without NSA support; they stated that the system is easy to learn and easy to use. A structured training course could only enhance the analyst training.

~~(S)~~ **Management Comments.** The resultant THINTHREAD, once built using NSA's corporate strategy, is not likely to be significantly different from the current capability, which is embodied within [redacted]

~~(S//SI)~~ **Audit Response.** THINTHREAD provides significant capabilities that [redacted] does not and cannot provide, such as processing all digital network intelligence [redacted]. Such capabilities are very important in identifying intelligence data.

~~(TS)~~ **Management Comments.** NSA stated that the THINTHREAD concept of operation is different from that used by today's Intelligence Community; however, NSA supports THINTHREAD components successfully integrated into the signal intelligence system, complete with comprehensive training. In addition, NSA stated that it started to create training and operation materials for THINTHREAD components in November 2002 when integration activities started. By April 2003, NSA had completed courseware for analyst and operator training, which is continually updated and relied on.

~~(TS)~~ **Audit Response.** THINTHREAD and its approach is a radical shift from NSA's current approach to digital network exploitation; however, it presents the best approach available to meet existing mission requirements and should be considered as an option to meet future requirements. NSA management has not accepted the THINTHREAD system and its approach as the solution for digital network exploitation and subsequently does not advocate its use. As a result, THINTHREAD is not widely used within NSA. Analysts who do use THINTHREAD either trained themselves or were trained by other analysts familiar with the system. None of the analyst we interviewed used the courseware; therefore, we are not commenting on the adequacy of the courseware itself but on the lack of knowledge that the courseware exists.

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

~~(C)~~ **Management Comments.** TRAILBLAZER welcomes an open review of THINTHREAD's 2001 end-to-end architecture to meet the requirements of the TRAILBLAZER Technology Demonstration Platform (Technology Demonstration Platform) because we believe that NSA's current strategy is valid and will be revalidated. The Program Executive Office (PEO) is taking the lead in establishing an independent review team for performing this assessment, with the intention that its results will be completed in time for inclusion into the Analysis of Alternatives and other Milestone B documentation. However, the performance of this additional study will have an impact on both the cost and schedule for Milestone B. PEO and TRAILBLAZER will estimate the cost/schedule impacts after receiving estimates from the review team and will decide at that time whether to respond with a Final Concurrence to these recommendations.

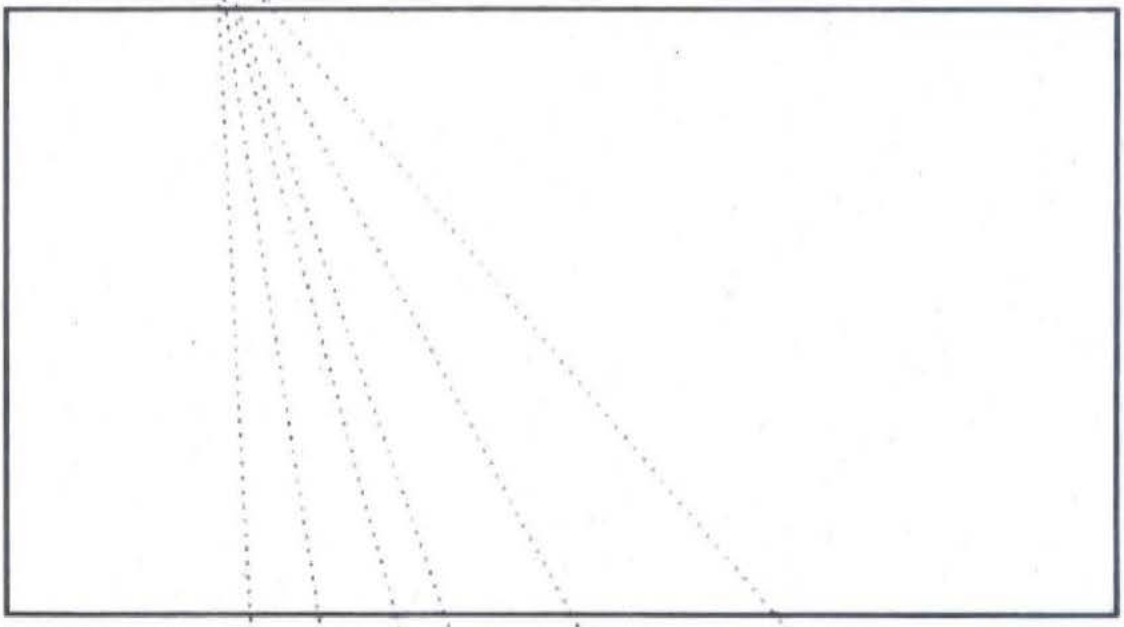
~~(C)~~ **Audit Response.** The recommendation was revised to reflect that THINTHREAD is an option for the digital network exploitation portion of the Technology Demonstration Platform.

~~(S//SI)~~ **Management Comments.** NSA management does not agree with the DoD Office of Inspector General's assessment that THINTHREAD is "a better technological and more affordable solution for digital network exploitation than the solution being developed by NSA." In fact, there are significant differences between THINTHREAD and TRAILBLAZER's missions.

[redacted]

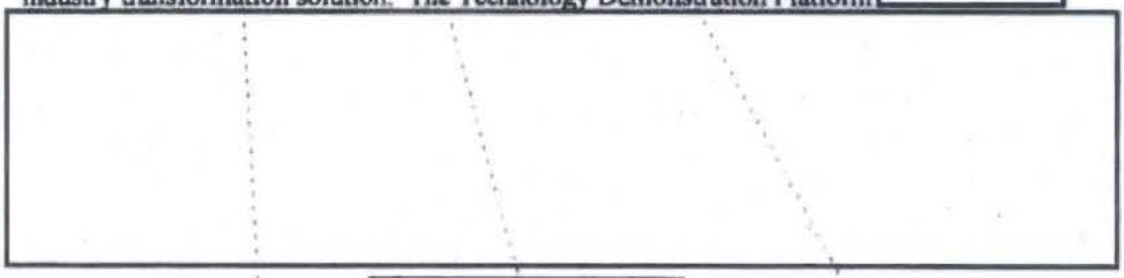
~~(S//SI)~~ **Audit Response.** We acknowledge the fact that the current scope of the TRAILBLAZER is to provide the information technology framework for the entire

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605



~~(C)~~ We acknowledge the fact that the initial THINTHREAD development was narrowly focused; however, THINTHREAD can be easily upgraded. NSA is being disingenuous because the completed studies compared only the front-end of THINTHREAD and Zone 1 – 3 of the [redacted] system. NSA needs to conduct a study to compare entire THINTHREAD system to current digital network exploitation systems.

(~~C//SI~~) **Management Comments.** The Technology Demonstration Platform is a prototype designed to address specific program risks and to satisfy congressional direction for an industry transformation solution. The Technology Demonstration Platform [redacted]



(~~C//SI~~) **Audit Response.** The [redacted] framework being developed by [redacted] is based on the existing [redacted] development and subsequently is flawed and does not meet current mission requirements and will not meet future mission requirements.

(~~C//SI~~) **Management Comments.** NSA stated that THINTHREAD's end-to-end architecture does not adequately meet the operational requirements for TRAILBLAZER's Technology Demonstration Platform because it has major mismatches or deficits in all key areas. While THINTHREAD is a focused operational implementation, the Technology Demonstration Platform effort is focused on a more reusable industry standard framework. Thus, the Technology Demonstration Platform framework can extend operational capabilities beyond the implementation of THINTHREAD. In the long run, the Technology

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

~~(S//SI)~~ Demonstration Platform should be able to integrate [redacted] to support a much broader set of Digital Network Information requirements than those performed by THINTHREAD.

~~(C)~~ **Audit Response.** This is an inaccurate statement. THINTHREAD was built using readily available commercial off-the-shelf technology and, when fully extended and enhanced, should not be difficult to integrate with Technology Demonstration Platform efforts; however, it is our understanding the Technology Demonstration Platform is being designed to integrate with the [redacted] development efforts which is the major concern. An external team of experts should be used to determine what parts of the Technology Demonstration Platform development should continue while THINTHREAD and its approach and technologies are considered as an alternative to the system being developed by [redacted]

~~(C)~~ **Management Comments.** NSA stated that the Technology Demonstration Platform will provide a commercial, extensible, and service-based "plug and play" framework. Though THINTHREAD does employ some commercial-off-the-shelf development products and technologies, that employment is at a lower level; overall, THINTHREAD resides on a custom-developed framework.

~~(C)~~ **Audit Response.** THINTHREAD was built using readily available commercial off-the-shelf technology and resides on a custom-developed framework that is inexpensive, small, and scalable. Contrary to the statement above, the THINTHREAD framework is extensible and is service-based plug and play.

~~(C)~~ **Management Comments.** NSA stated that the Technology Demonstration Platform includes major development efforts to transform [redacted] Transformation of NSA databases was not a THINTHREAD activity. This is just one a major difference between Technology Demonstration Platform and THINTHREAD.

~~(S//SI)~~ **Audit Response.** These statements are inaccurate. Although THINTHREAD development started in early 1999 and was operational in late 1999, it is still state-of-the-art and revolutionary in design. THINTHREAD provides its [redacted]

~~(S//SI)~~ NSA documented its problems with its current assortment of databases. These databases hold large amounts of data with little or no intelligence value. [redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

by THINTHREAD was still up and running and he directed that it immediately be stopped and personnel involved be removed and system take over the requirement.

(S) Management Comments. NSA stated that the Technology Demonstration Platform has a significant Information Assurance effort, to THINTHREAD does not address information assurance issues. This limits the extent to which THINTHREAD could be deployed and certified.

(S) Audit Response. Original THINTHREAD developers maintained that information assurance could be handled by another software application; this is routinely done throughout the Federal Government and DoD.

(S) Management Comments. NSA management stated that the Technology Demonstration Platform will begin THINTHREAD does not address THINTHREAD also does not address the designed into Technology Demonstration Platform.

(S) Audit Response. NSA statements are inaccurate. Any necessary commercial-off-the-shelf tools and legacy tool could be integrated with THINTHREAD. The signal intelligence data produced by THINTHREAD is much easier for analysts to retrieve and analyze than existing tools and capabilities emphasized by NSA management. Although has been completed for THINTHREAD, we believe that the number of enterprise integration experts available at NSA and within local area companies will avoid any major problems. The THINTHREAD design and approach considers information

(S) Management Comments. NSA managements stated that TRAILBLAZER and the Technology Demonstration Platform have invested considerable effort to build a signal intelligence architecture that is open and scaleable, applies DoD, commercial, and NSA standards; and that is documented in DoD Architecture Framework views. THINTHREAD architecture and acquisition process were not consistent with the guide lines of DoD Directive 5000.2, and the program exhibited shortcomings that constituted "a serious risk to successful deployment," according to the March 25, 2002, Technology, Test, and Evaluation Assessment mentioned on pages 20-21 of the Office of Inspector General Report and quoted extensively in the Office of Inspector General's Appendix G. This is especially critical documentation, given the emphasis on Horizontal Integration and the DoD Global Grid evolution.

(S) Audit Response. NSA comments are inaccurate. The THINTHREAD architecture is open and scaleable. Information that we reviewed and previous Inspector General reports show that the NSA acquisition processes is not always consistent with the

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

~~(C)~~ guidelines of DoD Directive 5000.2. The program shortcomings referenced in the Technology, Test, and Evaluation Assessment dealt mainly with program documentation, which the report noted did not present a significant deployment risk.

~~(S//SI)~~ **Management Comments.** NSA management comments stated that the Executive Summary's assertion that NSA "disregarded solutions to urgent national security needs" is not accurate. THINTHREAD was deployed to

~~(S//SI)~~ **Audit Response.** NSA comments are inaccurate. Major issues raised in the management comments are addressed in the report, specifically the issue of THINTHREAD scalability. In the FY2001 Intelligence Authorization Bill (CMS 1-25-2001), December 17, 2001, the House Permanent Select Committee on Intelligence directed that of the NSA budget be used to immediately deploy THINTHREAD to sites selected for optimal response to and for . The NSA briefed the House Permanent Select Committee on Intelligence that THINTHREAD would be deployed to sites, but the THINTHREAD Project Management Office modified this to sites. In addition, all services that are needed to exploit the digital network can be added to THINTHREAD. For example, the THINTHREAD approach to digital network exploitation is a shift from existing practices at NSA because

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

~~(C)~~ **Management Comments.** NSA management stated that the DoD Inspector General Report's citation of the NTA Study's recommendation to support adoption of THINTHREAD also needs clarification. The Study did not recommend THINTHREAD as a long-term solution, but rather as an interim capability prototype alternative to the [redacted]

~~(S)~~ **Audit Response.** NSA comments are inaccurate. The NSA Modernization Study recommended that THINTHREAD be included as an alternative solution to TRAILBLAZER.

~~(C)~~ **Management Comments.** NSA management comments stated that although the Executive Summary indicated that TRAILBLAZER excluded THINTHREAD from consideration as an alternative framework, it should be pointed out that documentation on both THINTHREAD and the [redacted] was provided to bidders for the Concept Development Phase. This fact is documented in the December 2001 Follow Up Report to the NTA's NSA Modernization Study (p. 13). However, none of the competing contractors chose to use THINTHREAD in their proposals, which is why this system was not included originally in the Analysis of Alternatives.

~~(S)~~ **Audit Response.** The Director, Signal Intelligence Directorate, stated that information about THINTHREAD technologies and approach was placed in the bidder's library. Placing files about THINTHREAD in a huge repository of other files and making those files accessible to contractors does not adequately support the NSA Modernization Study recommendation to include THINTHREAD in the alternative-of-analysis process for TRAILBLAZER. In addition, information provided to the contractors for the Concept Development Phase by NSA directed them to ensure their proposals for system met the current NSA architecture and framework, to include [redacted] ervices, and other legacy constraints, which THINTHREAD approach does not comply.

(U//~~FOUO~~) **Management Comments.** NSA management comments stated that the TRAILBLAZER has long-established plans for external assessment of the Technology Demonstration Platform for preparation for Milestone B. The Independent Verification and Validation (IV&V) of 29 Evaluation Criteria is being conducted by NSA's independent Office of Corporate Assessments' Test and Technical Evaluation element (TTE). The Early Operational Assessment and Operational Assessment will be performed by JITC, which had established a presence in TRAILBLAZER spaces by November 2003. Results of both activities will be provided to the Milestone Decision Authority before Milestone B.

(U//~~FOUO~~) **Audit Response.** TRAILBLAZER postponed Milestone B scheduled for December 2004 because of technical issues with the Technology Demonstration Platform. February 2005 is the earliest date that TRAILBLAZER will be ready for MILESTONE B.

(U//~~FOUO~~) **Management Comments.** NSA management comments stated that the results of the independent assessment of THINTHREAD and TRAILBLAZER Technology Demonstration Platform will be provided to the MDA by Milestone B, currently scheduled for December 2004.

~~(S//SI)~~ **Management Comments.** NSA management comments stated that the Executive Summary's statement that TRAILBLAZER development "wasted hundreds of millions

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

~~(S//SI)~~ of dollars" is not accurate. As the NTA Modernization Study observed, TRAILBLAZER is not only about digital network exploitation, but also encompasses cultural transformation (people, processes, and policies) and [redacted] And, although TRAILBLAZER is currently in the developmental phase, it has already delivered significant capabilities.

~~(S//SI)~~ **Audit Response.** The NSA management comments are inaccurate. The report Executive Summary does not claim that TRAILBLAZER development "wasted hundreds of millions of dollars." Instead, this phrase is only used to accurately describe the specific hotline complaint allegation that initiated this audit.

[redacted]

[redacted]

~~(S//SI)~~ **Management Comments.** NSA management comments stated that the total costs for the prototype were closer to [redacted] rather than the [redacted] quoted in the Office of Inspector General Report.

~~(S)~~ **Audit Response.** The total costs of the Initial Transformation Activities and [redacted] accurately reflect information received from the NSA budget office and do not include cost for NSA employees.

~~(S)~~ **Management Comments.** NSA management comments also questions the Executive Summary's statement that "NSA modified or suppressed studies and comparisons that favored THINTHREAD over TRAILBLAZER," and stated that the audit report did not identify where the information was obtained.

~~(S)~~ **Audit Response.** We have documented information to support this statement; however, because of fear of reprisal, we agreed to keep the sources anonymous.

~~(S//SI)~~ **Management Comments.** The Office of Inspector General Report's citations of the [redacted] THINTHREAD Technical Review (February 2001) and the THINTHREAD Follow-up for D/DIR (March 2001) were also incomplete and contained inaccuracies. The presentation of the results of the February review on page 13 of the Office of Inspector General Report was only a subset of the total recommendations and findings. For example, although this study (commissioned by the Chief of the Mission Applications Group, not the D/DIR as stated in the Office of Inspector General Report) recommended adoption of THINTHREAD's

[redacted]

4. ~~(S//SI)~~ Provide requested resources to the THINTHREAD team (dollars and people).

5. ~~(S//SI)~~ Provide THINTHREAD proper management support.

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

6. (~~S//SI~~) In light of this, not all of the [redacted] system is required.

~~(C)~~ **Audit Response:** Our wording reflects information received from our sources. We reviewed all of the comments below and checked our sources and made adjustments as required.

[redacted]

4. (~~S//SI~~) NSA never provided the requested resources (dollars and people) to the THINTHREAD team. Instead, NSA dismantled the team and did little to enhance THINTHREAD.

5. (~~S//SI~~) There was no evidence that NSA provided proper management support to enhance THINTHREAD.

[redacted]

(~~S//SI~~) **Management Comments.** NSA management comments stated that the follow-up technical review (March 2001), requested by Deputy Director, also stated that both the THINTHREAD and TRAILBLAZER approaches were of value. It recommended

[redacted]

It should be noted that similar inconsistencies exist with the Office of Inspector General Report's descriptions of the [redacted] and Technology, Test, and Evaluation Studies, although the Appendices are far more accurate than the references contained in the body of the Report.

(~~S//SI~~) **Audit Response.** The March 2001 technical review recommended that the [redacted] system be developed and deployed to [redacted] and THINTHREAD to [redacted] The study team was pressured by NSA management to make recommendations for the development and deployment of the [redacted] system.

Doc ID: 6585999

Appendix K. Report Distribution (U)

(U)

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition, Technology, and Logistics
Under Secretary of Defense (Comptroller)
Under Secretary of Defense for Intelligence
Assistant Secretary of Defense for Networks and Information Integration

Other Defense Organization

Director, National Security Agency
Inspector General, National Security Agency
Inspector General, Defense Intelligence Agency
Inspector General, National Geospatial-Intelligence Agency
Inspector General, National Reconnaissance Office

Congressional Committees and Subcommittees, Chairman and Ranking Minority Member

Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Select Committee on Intelligence
House Subcommittee on Defense, Committee on Appropriations
House Committee on Armed Services
House Permanent Select Committee on Intelligence

(U)

Bates 000328

National Security Agency/Central Security Service Comments (U)

~~TOP SECRET//COMINT//X1~~
NATIONAL SECURITY AGENCY
CENTRAL SECURITY SERVICE
FORT GEORGE G. MEADE, MARYLAND 20755-6000

13 August 2004

MEMORANDUM FOR INSPECTOR GENERAL, DEPARTMENT OF DEFENSE
ATTN: Deputy Assistant Inspector General for Intelligence Audits

SUBJECT: (U) Audit of the Requirements for the TRAILBLAZER and THINTHREAD Systems, dated June 18, 2004 (Project No. D2003AL-0100)

(U//~~FOUO~~) Thank you for the opportunity to review and comment on the referenced draft report. Consolidated management comments from our Signals Intelligence Directorate (SID), Acquisition Organization (DA) and Information Technology Infrastructure Services Organization (ITIS) are enclosed. In addition, per your request, a security classification review of the draft report is enclosed. If you have any questions or need additional information, please contact [redacted]

NSA (b)(3) 50 USC 3605

[redacted]
Deputy Chief of Staff

Encl:
a/s

"This correspondence may be declassified and marked "UNCLASSIFIED//~~FOUO~~" upon removal of enclosure(s)"

Derived From: NSA/CSSM 123-2
Dated: 24 Feb 1998
Declassify On: X1

~~TOP SECRET//COMINT//X1~~

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

~~TOP SECRET//COMINT//X1~~

(U) Audit of the Requirements for the TRAILBLAZER and THINTHREAD Systems

(U//FOUO) Project No. D2003AL-0100

(C) This paper contains responses to recommendations made by the DoD OIG Audit of the Requirements for the TRAILBLAZER and THINTHREAD Systems (Project No. D2003AL-0100). It also includes discussion of key comments from the OIG report that NSA feels obligated to address.

~~(S//SI)~~ A significant point of departure among OIG Report assertions and NSA understanding, reflected within NSA's responses below, concerns the validity of using THINTHREAD as the Agency's Digital Network Exploitation (DNE) system. NSA understands that THINTHREAD does not contain the functionality or capability maturity to be the Intelligence Community's DNE system -- and it does not need to be. [redacted] is the Community's DNE system: it contains the depth and breadth of capabilities to exploit all known DNE targets (see Annex A), it uses state-of-the-art technologies (both in hardware and software), and it supports itself with [redacted] program management and systems engineering. THINTHREAD's best-of-breed capabilities are integrated into [redacted] valuing THINTHREAD's contribution to DNE and capitalizing on [redacted] programmatic and systems engineering maturity. Any assertion that THINTHREAD might be used to "replace" [redacted] exposes a significant misunderstanding of the situation.

~~(C)~~ Although NSA will agree to conduct an independent assessment of TRAILBLAZER and THINTHREAD, we believe that it will validate all of the assertions made in our responses to the OIG recommendations. Furthermore, we do not agree with the original Hot Line complaint that fraud, waste, and abuse occurred during the THINTHREAD/[redacted]/TRAILBLAZER decision process, which was conducted in an open fashion to provide the best benefit for Agency mission and customers. More importantly, there has been no evidence documented during this OIG investigation that supports that complaint.

(C) The world's most advanced cryptologic experts, who are resident at NSA, have assessed THINTHREAD and [redacted] and are confident in the approach taken. With mission experience and training unique to NSA, these experts are best suited to make an assessment of the nation's cryptologic needs.

DRV FM: NSA/CSSM 123-2
Dated: 24 Feb 98
DECL ON: X1

~~TOP SECRET//COMINT//X1~~

1

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

~~TOP SECRET//COMINT//X1~~

(U//FOUO) Project No. D2003AL-0100

~~(S//SI)~~ DoD OIG Recommendation A.1: Deploy THINTHREAD as the interim capability digital network exploitation system.

(U) NSA Response: Nonconcur

~~(S//SI)~~ *THINTHREAD capabilities are already deployed within NSA's processing, exploitation, analysis and production programs; as a result of previous Congressional direction, sound systems engineering practices, and common sense. It would be detrimental to NSA's mission to remove non-THINTHREAD capabilities from the current digital network exploitation architecture.*

~~(S//SI)~~ "[redacted] and THINTHREAD Technical Review," written by [redacted] in February 2001, recommended adopting THINTHREAD's [redacted] and THINTHREAD's [redacted] NSA agreed and leveraged TRAILBLAZER activity to integrate [redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

~~(S//SI)~~ In FY2002 Congress directed NSA to deploy THINTHREAD to [redacted] sites. NSA complied with this directive (see Annex B – FY2002 THINTHREAD Deployments.).

[redacted]

~~TOP SECRET//COMINT//X1~~

2

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

~~TOP SECRET//COMINT//NF~~

(U//FOUO) Project No. D2003AL-0100

(~~S~~) NSA recommends that the following items be highlighted within the OIG Project Report:

- NSA cooperates with and responds to Congress;
- THINTHREAD capability is valued by NSA;
- THINTHREAD capability is integrated within NSA's processing services;
- THINTHREAD does not possess the breadth and depth of services required by the Intelligence Community;
- THINTHREAD does not need to possess the breadth and depth of services required by the Intelligence Community because its overarching program, , does; and,
- Subordinating to THINTHREAD would be detrimental to Intelligence Community requirements.

(U) Target Date of Completion: Complete.

~~TOP SECRET//COMINT//X1~~

3

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

Fu
I

~~TOP SECRET//COMINT//X1~~

(U//~~FOUO~~) Project No. D2003AL-0160

~~(S//SI)~~ DoD OIG Recommendation A.2: Use a complementary approach with [redacted] and THINTHREAD in the collection sites, where required, until THINTHREAD is fully enhanced and extended to handle [redacted]

(U) NSA Response: Nonconcur

[redacted]

~~TOP SECRET//COMINT//X1~~

4

Revis
pg. 25

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

~~TOP SECRET//COMINT//X1~~

(U//~~FOUO~~) Project No. D2003AL-0180

~~(TS//SI)~~ The OIG Report omits an absolutely critical element: all THINTHREAD

[redacted]

~~(S)~~ The OIG Report omits another critical element: "fully enhanced and extended THINTHREAD" is not defined. NSA believes that a "fully enhanced and extended THINTHREAD" that is engineered in concert with NSA's corporate strategy will be

[redacted]

~~TOP SECRET//COMINT//X1~~

5

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

~~TOP SECRET//COMINT//X1~~

(U//~~FOUO~~) Project No. D2083AL-0180

(~~S~~) NSA is convinced that THINTHREAD does not have the potential to be its sole DNE processing system. THINTHREAD provides the greatest value to the SIGINT system and to the Analyst by remaining integrated within [redacted] Further, NSA believes that the scope, cost and risk of migrating from [redacted] to THINTHREAD are not characterized well enough to supplant existing, corporate SIGINT strategy. In short:

- (~~S~~) The cost to produce "fully enhanced and extended" THINTHREAD, particularly in terms of level-of-effort and skill availability, is not known but certainly not trivial;
- (~~S~~) The cost of modifying the rest of the SIGINT System, as well as impact to other parties' systems, to conform to THINTHREAD operations is not known but certainly not trivial;
- (~~S~~) The cost to support multiple platforms without impacting mission throughout a migration to THINTHREAD is not known but certainly not trivial;
- (~~S~~) The achievability, cost and impact of retraining the entire Intelligence Community's analysts to use THINTHREAD while maintaining mission is not known but certainly not trivial; and,
- (~~S~~) The resultant THINTHREAD, once built using NSA's corporate strategy, is not likely to be significantly different from the current capability, which is embodied within [redacted]

(U) Target Date of Completion: Complete.

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

~~TOP SECRET//COMINT//X1~~

(U//~~FOUO~~) Project No. D2003AL-0100

~~(C)~~ DoD OIG Recommendation A.3: Develop a formal classroom training course for the entire THINTHREAD system,

(U) NSA Response: Concur

~~(S)~~ *NSA agrees with an underlying report theme: that THINTHREAD's concept of operation represents a divergent method from that used by today's Intelligence Community. THINTHREAD components successfully integrated into the SIGINT System, however, are supported just like all others, complete with comprehensive training.*

~~(S)~~ NSA understands the critical role training plays in successfully achieving its mission and is committed to producing training materials for each of its subsystems. NSA started creating training and operation materials for THINTHREAD components when integration activities started in November 2002. By April 2003, NSA had Data Item Description DI-ALSS-81523A-guided courseware for THINTHREAD that is continually updated and relied on for analyst and operator training to this day. (Current courseware is more than 350 pages and is not included within this document. However, copy will be presented if requested.)

(U) Target Date of Completion: Complete.

~~TOP SECRET//COMINT//X1~~

7

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

Final Report Reference

~~TOP SECRET//COMINT//X1~~

(U//~~FOUO~~) Project No. D2003AL-0100

~~(C)~~ DoD OIG Recommendation B.1: Designate a team to assess the ability of THINTHREAD or its technologies as a long-term solution to meet the operational requirement of the TRAILBLAZER Technology Demonstration Platform.

(U) NSA Response: Concur, with comments

~~(C)~~ TRAILBLAZER welcomes an open review of THINTHREAD's 2001 end-to-end architecture to meet the requirements of the TRAILBLAZER Technology Demonstration Platform (TDP) because we believe that NSA's current strategy is valid and will be revalidated. The Program Executive Office (PEO) is taking the lead in establishing an independent review team for performing this assessment, with the intention that its results will be completed in time for inclusion into the Analysis of Alternatives and other Milestone B documentation. However, the performance of this additional study will have an impact on both the cost and schedule for Milestone B. PEO and TRAILBLAZER will estimate the cost/schedule impacts after receiving estimates from the review team and will decide at that time whether to respond with a Final Concurrence to these recommendations.

(U//~~FOUO~~) At this time, it is necessary to address some misconceptions in the DoD OIG's Executive Summary and Draft Report, as follows:

1. ~~(S//SI)~~ First, NSA does not agree with the DoD OIG's assessment that THINTHREAD represents "a better technological and more affordable solution for digital network exploitation than the solution being developed by NSA." In fact, there are significant differences between THINTHREAD and TRAILBLAZER's missions.

[redacted]

~~TOP SECRET//COMINT//X1~~

8

Revised p.35

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

~~(U//FOUO) Project No. D2003AL-0100~~

[redacted]

~~(S//SI)~~ THINTHREAD's end-to-end architecture does not adequately meet the operational requirements for TRAILBLAZER's TDP, with major mismatches or deficits in all key areas:

- ~~(S//SI)~~ Scope of DNE mission requirements addressed: While THINTHREAD is a focused operational implementation, the TDP effort is focused on a more reusable industry standard framework. Thus, the TDP framework can extend operational capabilities beyond the implementation of THINTHREAD. In the long run, the TDP should be able to integrate [redacted] services to support a much broader set of DNI requirements than those performed by THINTHREAD.
- ~~(S//SI)~~ End-to-End Framework based on industry standards: The TDP will provide a commercial, extensible, and service-based "plug and play" framework. Though THINTHREAD does employ some COTS development products and technologies, that employment is at a lower level; overall, THINTHREAD resides on a custom-developed framework.
- ~~(S//SI)~~ Knowledge Management and Discovery: TDP includes major development efforts to transform NSA's databases and provide a state-of-the-art [redacted]
- ~~(S//SI)~~ Information Assurance: TDP has a significant Information Assurance effort, to ensure [redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

Final report Reference

~~TOP SECRET//COMINT//~~

~~(U//FOUO) Project No. D2003/AL-0100~~

THINTHREAD does not address information assurance issues. This limits the extent to which THINTHREAD could be deployed and certified.

- ~~(S)~~ Large-scale Processing Integration: The TDP will begin the process of [redacted] THINTHREAD does not address [redacted] THINTHREAD also does not address the [redacted] designed into TDP.

- ~~(C)~~ SIGINT Architecture and Documentation: TRAILBLAZER and TDP have invested considerable effort to build a SIGINT architecture that is consistent with current DoD emphasis on open architecture and scalability, that applies DoD/commercial/NSA standards, and that is documented in DoD Architecture Framework (DoDAF) architecture views. THINTHREAD's architecture and acquisition process was not consistent with DoD 5000.2 guidelines, and the program exhibited shortcomings that constituted "a serious risk to successful deployment," according to the March 25, 2002 Technology, Test, and Evaluation (TTE) Assessment mentioned on pages 20-21 of the OIG Report and quoted extensively in the OIG's Appendix G. This is especially critical documentation, given the emphasis on Horizontal Integration and the DoD Global Grid evolution.

- [redacted] TDP personnel and the development contractor also have identified new work roles and reached out to NSA's education & training, human resources, and user communities to prepare NSA and the Service Cryptologic Elements to operate, maintain, and use the new TRAILBLAZER-provided system and the analytic tools hosted on it. THINTHREAD does not address process/workforce transformation, as mentioned by the TTE Report quoted on page 71 of the OIG's Appendix G. .

page 77

2. ~~(S//SI)~~ The Executive Summary's assertion that NSA "disregarded solutions to urgent national security needs" is not accurate. THINTHREAD was deployed to [redacted] locations, as mentioned in the OIG report, in this paper's response to Recommendation A.1., and in our Annex B. NSA integrated best-of-breed THINTHREAD services into its processing systems. Annex A, [redacted] Capabilities, clearly indicates the integration of THINTHREAD and other capabilities into the Agency's [redacted] system. In April 2001, TRAILBLAZER also conducted an informal comparison of

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

[redacted]

~~TOP SECRET//COMINT//X1~~

(U//~~FOUO~~) Project No. D2003AL-0100

THINTHREAD and the TRAILBLAZER [redacted]

[redacted]

3. (~~S~~) The OIG Report's citation of the NTA Study's recommendation to support adoption of THINTHREAD also must be clarified. This Study did not recommend THINTHREAD as a long-term solution, but rather as an interim capability prototype alternative to the [redacted]

4. (~~S~~) Although the Executive Summary indicated that TRAILBLAZER excluded THINTHREAD from consideration as an alternative framework, it should be pointed out that documentation on both THINTHREAD and the [redacted] was provided to bidders for the Concept Development Phase. This fact is documented in the December 2001 Follow Up Report to the NTA's NSA Modernization Study (p. 13). However, none of the competing contractors chose to use THINTHREAD in their proposals, which is why this system was not included originally in the Analysis of Alternatives.

(U//~~FOUO~~) Target Date of completion: Milestone B is currently scheduled for December 2004.

~~TOP SECRET//COMINT//X1~~

11

Final Report Reference

~~TOP SECRET//COMINT//~~

(U//~~FOUO~~) Project No. D2003AL-0100

(U//~~FOUO~~) DoD OIG Recommendation B.2: Provide the results of the external assessment to the TRAILBLAZER Technology Demonstration Platform Milestone Decision Authority for use in making the Milestone B decision.

(U) NSA Response: Concur

(U//~~FOUO~~) As mentioned in the response to Recommendation B.1, the PEO and TRAILBLAZER intend to provide the results of the independent assessment to the TRAILBLAZER Milestone Decision Authority (MDA) for use in making the Milestone B decision. These results will also be sent to the DoD IG, the NSA IG, and NSA's Office of General Counsel.

(U//~~FOUO~~) It should also be noted that TRAILBLAZER has long-established plans for external assessment of the TDP for preparation for Milestone B. The Independent Verification and Validation (IV&V) of 29 Evaluation Criteria is being conducted by NSA's independent Office of Corporate Assessments' Test and Technical Evaluation element (TTE). The Early Operational Assessment and Operational Assessment will be performed by JITC, which had established a presence in TRAILBLAZER spaces by November 2003. Results of both activities will be provided to the Milestone Decision Authority before Milestone B.

~~(C)~~ Target Date of completion: Results of the independent assessment of THINTHREAD and TRAILBLAZER TDP will be provided to the MDA by Milestone B, currently scheduled for December 2004.

~~(S)~~ DoD OIG Recommendation B.3: Include THINTHREAD in the TRAILBLAZER Analysis of Alternatives required for Milestone B.

Revised p.35

(U) NSA Response: Concur

(~~S~~) TRAILBLAZER plans to include the results of the independent assessment of THINTHREAD in the Analysis of Alternatives required for Milestone B.

(U//~~FOUO~~) Target Date of completion: This action will be completed by the Milestone B target date, currently scheduled for December 2004.

~~TOP SECRET//COMINT//~~

12

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

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(U//FOUO) Project No. D2003AL-0100

(U) Comments on DoD IG Audit of Requirements for the TRAILBLAZER and THINTHREAD Systems
Project No. D2003AL-0100

(U//FOUO) The following comments address technical and editorial items of concern in the subject Project Report.

1. (~~S//SI~~) The Executive Summary's statement that TRAILBLAZER development "wasted hundreds of millions of dollars" is not accurate. As the NTA Modernization Study observed, TRAILBLAZER is not only about digital network exploitation, but also encompasses cultural transformation (people, processes, and policies) and [redacted] And, although TRAILBLAZER is currently in the developmental phase, it has already delivered significant capabilities, such as:

[redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

[redacted]

~~TOP SECRET//COMINT//~~

(U//FOUO) Project No.: D2003AL-0100

[redacted]

2. (~~S~~) TRAILBLAZER also questions the Executive Summary's statement that "NSA modified or suppressed studies and comparisons that favored THINTHREAD over TRAILBLAZER." TRAILBLAZER has seen no evidence of either modification or suppression. It is not clear where this statement originated.

3. (~~S//SI~~) The OIG Report's citations of the [redacted] THINTHREAD Technical Review (February 2001) and the THINTHREAD Follow-up for D/DIR (March 2001) were also incomplete and contained inaccuracies. The presentation of the results of the February review on page 13 of the OIG Report was only a subset of the total recommendations and findings. For example, although this study (commissioned by the Chief of the Mission Applications Group, not the D/DIR as stated in the OIG Report) recommended adoption of THINTHREAD's [redacted]

[redacted]

~~TOP SECRET//COMINT//~~

14

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

[redacted]

~~TOP SECRET//COMINT//~~

~~(U//FOUO) Project No. D2003AL-0100~~

[redacted]

- ~~Provide requested resources to the THINTHREAD team (dollars and people)~~
- ~~Provide THINTHREAD project management support~~
- ~~In light of this, not all of the [redacted] system is required~~

~~(S//SI)~~ The follow-up technical review (March 2001), requested by D/DIR, also stated that both the THINTHREAD and TRAILBLAZER approaches were of value. It recommended deployment of TRAILBLAZER's P&E incrementally in advance of the [redacted] although the Appendices are far more accurate than the references contained in the body of the Report.

4. ~~(U//FOUO)~~ It should be noted that Initial Operating Capability of the TRAILBLAZER Objective Program is FY2006, rather than FY2009 (as stated in page 1 of the Draft OIG report). Finally, the NSA IG concerns about the Program Engineering and Business Management contract mentioned in Appendix A did not center on TRAILBLAZER-specific practices but rather those of the SIGINT Programs Front Office. These issues have since been addressed by NSA management.

[redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

[redacted]

~~TOP SECRET//COMINT//~~

15

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605

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(U//FOUO) Project No. D2003A1_0100

~~TOP SECRET//COMINT//X1~~

ANNEX A

NSA (b)(3) 50 USC 3605

(U//~~FOUO~~) ANNEX A: [redacted] AND THINTHREAD CAPABILITIES

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

NSA (b)(3) 50 USC 3605

~~TOP SECRET//COMINT//X1~~

(U//FOUO) Annex A: [redacted] THINTHREAD Cap. (continued)

[redacted]

~~TOP SECRET//COMINT//X1~~

Annex A - 2

NSA (b)(3) 50 USC 3605

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

~~TOP SECRET//COMINT//X1~~

(U//~~FOUO~~) Annex A: [redacted] and THINTHREAD Cap. (continued)

[redacted]

~~TOP SECRET//COMINT//X1~~

Annex A – 3

~~TOP SECRET//COMINT//20291123~~

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

NSA (b)(3) 50 USC 3605

~~TOP SECRET//COMINT//X1~~

(U//FOUO) Annex A: [redacted] and THINTHREAD Cap. (continued)

[redacted]

~~TOP SECRET//COMINT//X1~~
Annex A – 4

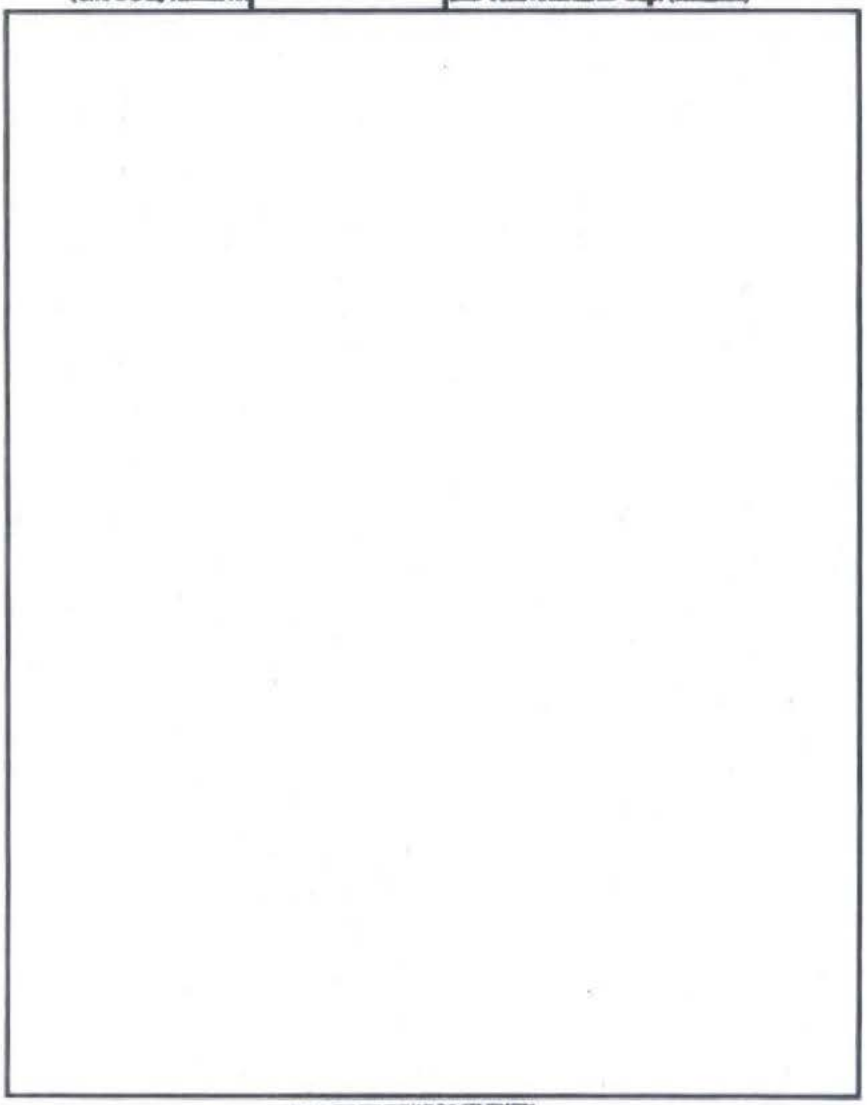
~~TOP SECRET//COMINT//20291123~~

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

NSA (b)(3) 50 USC 3605

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(U//FOUO) Annex A: [redacted] and THINTHREAD Cap. (continued)



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Annex A – 5

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

NSA (b)(3) 50 USC 3605

~~TOP SECRET//COMINT//X1~~

(U//~~FOUO~~) Annex A: [redacted] and THINTHREAD Cap. (continued)

[redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

NSA (b)(3) 50 USC 3605

~~TOP SECRET//COMINT//X1~~

(U//FOUO) Annex A: [redacted] and THINTHREAD Cap. (continued)

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

NSA (b)(3) 50 USC 3605

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~~(U//FOUO) Annex A: [redacted] and THINTHREAD Cap. (continued)~~

[redacted]

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~~Annex A – 8~~

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

NSA (b)(3) 50 USC 3605

~~TOP SECRET//COMINT//X1~~

~~(U//FOUO) Annex A: [redacted] and THINTHREAD Cap. (continued)~~

[redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

NSA (b)(3) 50 USC 3605

~~TOP SECRET//COMINT//X1~~

(U//~~FOUO~~) Annex A: [redacted] and THINTHREAD Cap. (continued)

[redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

NSA (b)(3) 50 USC 3605

~~TOP SECRET//COMINT//X1~~

(U//FOUO) Annex A: [redacted] and THINTHREAD Cap. (continued)

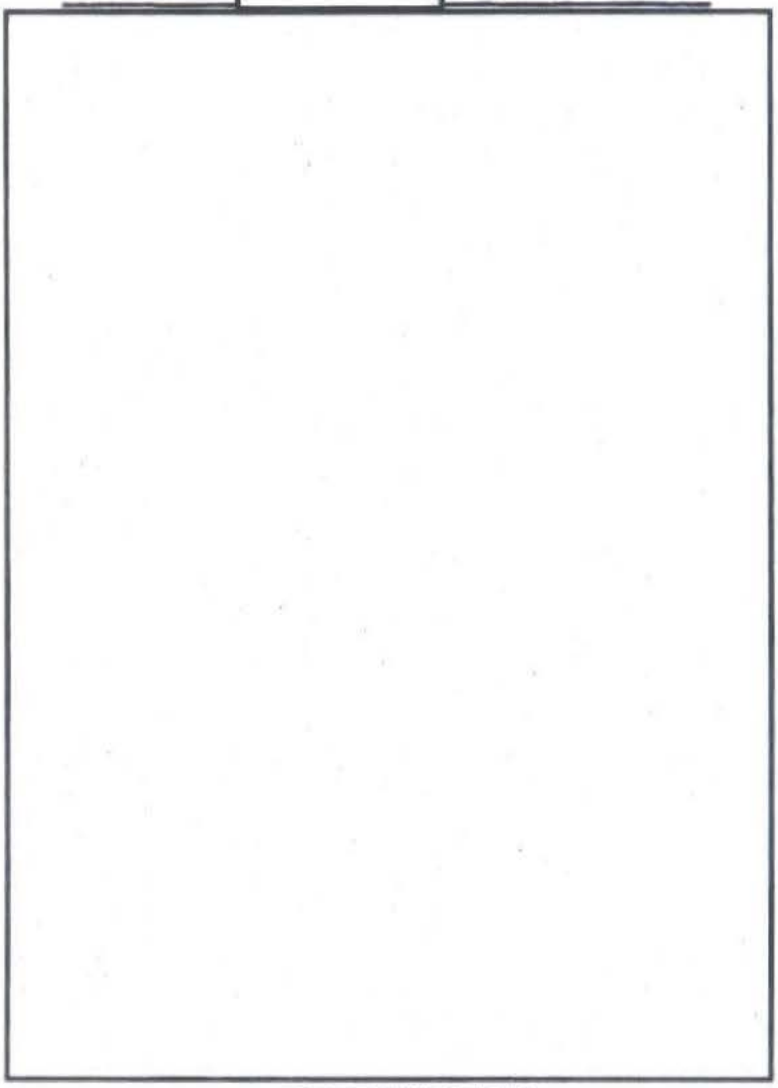
[redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

NSA (b)(3) 50 USC 3605

~~TOP SECRET//COMINT//X1~~

(U//~~FOUO~~) Annex A [redacted] and THINTHREAD Cap. (continued)



~~TOP SECRET//COMINT//X1~~

ANNEX B

(U//FOUO) ANNEX B: THINTHREAD DEPLOYMENTS

~~TOP SECRET//COMINT//X1~~

(U//~~FOUO~~) Annex B: THINTHREAD Deployments

(U//~~FOUO~~) The following table lists THINTHREAD deployments.

[redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605, (b)(3) 50 USC 3024 (i)

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~~CONFIDENTIAL//20291125~~

SECURITY CLASSIFICATION

RF/K
cc: DI 3

NSA STAFF PROCESSING FORM

TO	EXREG CONTROL NUMBER	KCC CONTROL NUMBER
CoS		DC09-017-05

THRU	ACTION	EXREG SUSPENSE
	☐ APPROVAL	
SUBJECT	☒ SIGNATURE	KCC SUSPENSE
(U) ~~TOP SECRET//COMINT~~ Office of the IG of the Department of Defense Report on TRAILBLAZER and THINTHREAD Systems	☐ INFORMATION	ELEMENT SUSPENSE

DISTRIBUTION

SUMMARY (U)

PURPOSE: (~~CONFIDENTIAL//20291125~~) Attached for your review and signature is the NSA consolidated response to the report from the DoD OIG on requirements for TRAILBLAZER and THINTHREAD systems.

Encl:
a/s

NSA (b)(3) 50 USC 3605

COORDINATION/APPROVAL

OFFICE	NAME AND DATE	SECURE PHONE	OFFICE	NAME AND DATE	SECURE PHONE
		x3825			
	2/11/05	x5606			
		x3200			

ORIGINATOR	ORG	PHONE (Secure)	DATE PREPARED
	DC09	963-5021	11 February 2005

FORM A6796 REV NOV 95
(Supersedes A6796 PFD 94 which is obsolete)

Derived From: NSA/CSSM 1-52
DATED: 23 November 2004
Declassify On: ~~20291125~~

SECURITY CLASSIFICATION
~~CONFIDENTIAL//20291125~~

Doc ID: 6585999

~~CONFIDENTIAL//20291123~~

NATIONAL SECURITY AGENCY
FORT GEORGE G. MEADE, MARYLAND 20755-6000

11 February 2005

MEMORANDUM FOR DEPUTY ASSISTANT INSPECTOR GENERAL FOR INTELLIGENCE AUDITS

SUBJECT: (U//~~FOUO~~) DoD OIG Audit Report Requirements for the TRAILBLAZER and THINTHREAD Systems, dated December 15, 2004 (Report 05-INTEL-03, Project No. D2003AL-0100) – INFORMATION MEMORANDUM

(U//~~FOUO~~) In response to the DoD OIG request for additional information on the TRAILBLAZER and THINTHREAD report, NSA/CSS provides consolidated corporate comments from our Signals Intelligence Directorate, Acquisition Organization, and Information Technology Infrastructure Services Organization (now the Information Technology Directorate).

NSA/CSS Response:

(S) The Program Executive Officer (PEO) for NSA Transformational Programs is committed to funding the timely completion of the requested assessment of THINTHREAD applicability to the TRAILBLAZER Technology Demonstration Platform and ensuring the results of the assessment are considered in the preparation and conduct of TRAILBLAZER Milestone B (MS B). Consistent with duties and responsibilities of the PEO, the independence of the assessment is assured. The appropriateness of incorporating THINTHREAD as an option for meeting the [redacted] requirements for TRAILBLAZER TDP and subsequent incorporation into the TRAILBLAZER Analysis of Alternatives will be determined by the PEO at the completion of the assessment.

~~(C)~~ Subsequent to the DoD OIG report, the TRAILBLAZER Milestone has been scheduled for late in the fourth quarter of FY05 from the previously scheduled earlier MS B. Accordingly, this now allows sufficient time for the conduct of the assessment recommended by the DoD OIG. As costs for the assessment will be covered by the PEO, and due to the revised schedule, risk to the TRAILBLAZER program is minimal. Therefore, a Risk Mitigation Plan is not appropriate. The assessment will be finalized by May 2005.

If you have any questions or need additional information, please contact [redacted]

Maria N. O'Connor

NSA (b)(3) 50 USC 3605 [redacted]

MARIA N. O'CONNOR
Chief of Staff

Derived From: NSA/CSSM 1-52
Dated: 23 November 2004
Declassify On: 2[redacted]

NSA (b)(1) 1.4(c), (b)(3) 50 USC 3605 [redacted]

~~CONFIDENTIAL//20291123~~

Doc ID: 6585999

~~CONFIDENTIAL~~

SECURITY CLASSIFICATION

NSA STAFF PROCESSING FORM

TO	EXREG CONTROL NUMBER	KCC CONTROL NUMBER
DC09		DA4-04-05

THRU	ACTION	EXREG SUSPENSE
SAE, D/SAE	[X] APPROVAL	
SUBJECT	[X] SIGNATURE	KCC SUSPENSE
(U//~~FOUO~~) THINTHREAD / TRAILBLAZER IG AUDIT REPORT	[ ] INFORMATION	ELEMENT SUSPENSE

DISTRIBUTION

SUMMARY

PURPOSE:

(U//~~FOUO~~) To provide the recommended PEO input to the consolidated NSA response regarding actions requested by the "final" Department of Defense (DoD) Office of Inspector General (OIG) report 05-INTEL-03, Requirements for TRAILBLAZER and THINTHREAD Systems of 15 December 2004.

BACKGROUND / DISCUSSION:

(U//~~FOUO~~) In their June '04 Draft of the Audit Report, the DoD OIG made the following recommendation, "Designate a team to assess the ability of THINTHREAD or its technologies as a long-term solution to meet the operational requirements of the TRAILBLAZER Technology Demonstration Platform."

~~(C)~~ In response to this draft, in August, the Agency concurred "with comments." The following is an excerpt from those comments; " The Program Executive Office (PEO) is taking the lead in establishing an independent review team for performing this assessment, with the intention that its results will be completed in time for inclusion into the Analysis of Alternatives and other Milestone B documentation."

~~(C)~~ At the time of this statement (Aug '04), the TRAILBLAZER Milestone B (MSB) was scheduled for December '04. When the final report was published, the PEO Assessment had not yet begun. Concerned that the assessment could not be completed in time to support a December milestone, the DoD OIG requested via the final report, that they be provided; "NSA plans to eliminate the cost and schedule risks for completing the assessment."

~~(C)~~ Since release of the final Audit Report, a DIRNSA-Chartered Transformational Advisory Panel (TAP) recommended TRAILBLAZER be rebaselined. The MSB is now planned for late Fourth Quarter FY05.

COORDINATION/APPROVAL

OFFICE	NAME AND DATE	SECURE PHONE	OFFICE	NAME AND DATE	SECURE PHONE
		2/24/05 966 3244			
		2/8/05 963-3842			
		963-5474			
			POC		963-8675

ORIGINATOR	ORG	PHONE (Secure)	DATE PREPARED
	DA4	963-7368	8 February 2005

FORM A6796 REV NOV 95 (Supersedes A6796 FEB 94 which is obsolete) NSN 7540-FM-001-5465

Derived From:

Declassify On

SECURITY CLASSIFICATION

~~CONFIDENTIAL~~

NSA (b)(3) 50 USC 3605

NSA (b)(3) 50 USC 3605

(U//~~FOUO~~) The development of this response has been coordinated with [redacted] and the TRAILBLAZER Program Management Office.

RECOMMENDATION:

1. (U//~~FOUO~~) A formal Risk Mitigation Plan is not recommended. The PEO is committed to conducting the assessment. The team is currently being formed, a kick-off mtg is planned for March, and the team is expected to report to Mr. [redacted] NLT May 31st. The cost and schedule impact of conducting the assessment pose very low risk to the Transformational Programs.

2. (U//~~FOUO~~) Recommend the response, provided as an attachment, be forwarded to the DoD OIG as part of the Agency's consolidated response to the Final Report.

Team Members (U)

(U) The Office of the Deputy Inspector General for Intelligence of the Department of Defense, Intelligence-Audit prepared this report. Personnel of the Office of the Inspector General of the Department of Defense who contributed to the report are listed below.

(U)

Thomas F. Gimble

DoD OIG (b)(6), (b)(7)(C)

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